THE BEAUTIES OF NATURE and ART DISPLAYED, IN A TOUR through the WORLD;

CONTAINING

I. A General Account of all the Countries in the World, remarkable for either Natural or Artificial Curiosities; their Situation, Boundaries, Extent and Divisions; their Rivers, Air, Soils, Chief Cities, &c.

II. A particular Account of the most curious natural Productions of each Country, in the Animal, Vegetable, and Fossil Kingdoms; of remarkable Mountains, Caverns, and Volcano's; of Medicinal and other singular Springs; of Cataracts, Whirlpools, &c.

III. An Historical Account of the most remarkable Earthquakes, Inundations, Fires, Epidemic Diseases, and other public Calamities, which have, at different times, visited the Inhabitants.

IV. Extraordinary Instances of Longevity, Fertility, &c. among the Inhabitants; together with an Account of their most celebrated Inventions, Discoveries, &c.

V. Particular Descriptions of the most remarkable Public Buildings, and other singular Productions of Art.

VI. Curious Remains of Antiquity; remarkable Laws, Customs, and Traditions of the Inhabitants; together with a Summary View of the most extraordinary Revolutions among them.

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THE

BEAUTIES

OF

NATURE AND ART

DISPLAYED;

IN A

TOUR through the WORLD.

CHAP. III.

Of SPAIN and PORTUGAL.

SECT. I.

A general Account of Spain *and* Portugal.

SPAIN, including Portugal, which, till of late, was part of that kingdom, is situated in the south-west part of the continent of Europe, between thirty-six and forty-four degrees of north latitude, and between ten degrees west, and three degrees east longitude. The greatest length of this kingdom, reckoning from Cape Creuz, in the north-east, to Cape St. Vincent, in the south-west, is about

ſeven hundred miles: and its greateſt breadth from Cape Finiſterre, in the north-weſt, to Cape Palos, in the ſouth-eaſt, is five hundred and fifty miles.

On the north, it is bounded by the Bay of Biſcay, and the Pyrenean mountains, which divide it from France; by the Mediterranean on the eaſt and ſouth, and by the Atlantic Ocean on the Weſt.

This country is now divided into the two kingdoms of Spain and Portugal.

Spain contains the kingdom of Galicia, the principality of Aſturia, and the lordſhip of Biſcay in the north; the kingdom of Navarre, the kingdom of Arragon, and the principality of Catalonia in the eaſt: the kingdom of Valencia, the kingdom of Murcia, the kingdom of Granada, and the province of Andaluſia in the ſouth; and the provinces of New and Old Caſtile, the kingdom of Leon, and the province of Eſtremadura in the middle.

The kingdom of Galicia contains the city of Compoſtella an archbiſhopric, the city of Lugo, the city of Tuy, the city of Orenze, the city of Mondonedo, the city of Corunna or the Groyn, and the city of Betanzos; and beſides theſe ſeven cities, there is a conſiderable number of towns of no ſmall note, particularly Ferrol, Vigo, and Rivadavia.

In the principality of Aſturia, which gives title to the eldeſt ſon of Spain, is the city of Oviedo only, and Santillana, a ſmall maritime town.

Ordonna, and Fonterabia are the only cities in the Lordſhip of Biſcay. The principal towns are Bilboa, its capital; St. Sebaſtian, a noted ſea-port; Toloſa; Vittoria, formerly Byzantium; Port Paſſage, St. Andero, Laredo, and Placentia.

In the kingdom of Navarre, are the city of Pampeluna, the city of Eſtella, the city of Olita, the city of Tudela, the city of Caſcant, the city of Viana, and the city of Taſalla.

In the kingdom of Arragon, are the city of Saragoſſa, an archbiſhopric; the city of Oſoa, the city of Jaca, the city of Teruel, the city of Taracona, the city of Albaraſin, the city of Balbaſtro, the city of Calatajud, the city of Burgia Borja, and the city of Daroca. Beſides theſe cities, there is a conſiderable number of towns, ſome of them not inferior to the cities in largeneſs and opulence.

In the principality of Catalonia, are the city of Barcelona, the city of Tarragona, the city of Tortoſa, the city of Lerida, the city of Urgel, the city of Girone, the city of Vich, the city of Solſonna, the city of Balaguer, the city of Manreſa. Theſe are the cities of note in this province; but it muſt be remembered, that Roſes,

though but a town, is very conſiderable for its ſtrength, trade, and commodious harbour.

In the kingdom of Valencia, are the city of Valencia, an ancient biſhopric; the city of Segorbe, ſuppoſed to have been the capital of the Celtiberi; the city of Origuela, the city of Zativa, the city of Alicant, the city of Denia, the city of Gandia, and the city of Morviedro: The other principal towns are Villa Hermoſa, Villareal and Alcira.

In the kingdom of Murcia, are the city of Murcia, the city of Lorca, and the city of Carthagena: the moſt conſiderable towns are Caravaca and Mula.

In the kingdom of Granada, are the city of Granada, an archbiſhopric; the city of Malaga, the city of Almeria, the city of Guadix: the other conſiderable towns in this province are Ronda, Antiquera, Baza, and Loya.

In the province of Andaluſia, are the city of Seville, an archbiſhopric; the city of Jaen, the city of Corduba, the city of Medina Sidonia, the city of Cadiz, the city of Gibraltar, ſubject to Great Britain; the cities of Port St. Maria, Ezeja, Baeza, Oſſuna, St. Lucar. Anduxar, Carmona, Alcalareal, Lucena, Arcos, Marchena, Ayamont, Ubeda, and Moguer.

In the province of Old Caſtile, are the city of Burgos, an archbiſhopric; the city of Valladolid, the city of Segovia, the city of Avila, the city of Oſma, the city of Siguenza, the city of Calahorra, the city of Logronno, the city of Soria, near which ſtood the ancient city of Numantia; and beſides theſe, are the cities of St. Domingo, Roa, Nagera, Aranda, and Calzada.

In the province of New Caſtile ſtands Madrid, the capital of all Spain; which, though not dignified with the title of city, may juſtly be reckoned one of the largeſt and moſt opulent towns in the world. The cities in this province are, Toledo, once the metropolis of Spain, and the greateſt and richeſt archbiſhopric in the world, next to that of Rome; Cuenca, Cividad Real, Guadalaxara, Hueta Gueta, and Alcarez. Beſides theſe cities, there are a very conſiderable number of towns, particularly Alcala de Henarez, Almanza, the Eſcurial, and Aranjuez.

In the kingdom of Leon, are the city of Leon, the city of Salamanca, the city of Cividad Rodrigo, the city of Zamora, the city of Aſtorgo, the city of Palencia, the city of Toro, the city of Medina del Rio Seco; and the towns of Tor de Cillas, Medina del Campo, and Alva.

In the province of Eſtremadura, are ſeven cities, Merida, Badajox, Placentia, Coria, Truxillo, Lerena, Xeres de los Cavalaros, beſides many towns, not inferior to cities, as to largeneſs, and number of inhabitants, particularly Alcantara, and Medilin.

There are three Spaniſh iſlands in the Mediterranean; Majorca, whoſe capital is Majorca; Minorca, belonging to Great Britain, whoſe chief towns are Citadella and Mahon; and Ivica, whoſe chief town is Ivica.

There are twenty-two univerſities in Spain; the chief of which are Salamanca, Compoſtella, Valladolid, Saragoſſa, Palentia, Seville, and Toledo. There are eight archbiſhoprics in Spain, and a great many biſhoprics.

The principal rivers in the kingdom of Spain, are,

1. The Iberus, now Ebro; it riſes at Fontibre, on the borders of Biſcay; thence croſſing Navarre, Arragon, and Catalonia, falls into the Mediterranean, below Tortoſa, after a courſe of about three hundred miles.

2. The Durius, now Douro, riſes near the city of Soria, in Old Caſtile, runs weſtward through Leon and Portugal, and falls into the Atlantic ocean below the city of Oporto.

3. The

3. The Tagus, now Tajo, riſes in the mountains of Molina, runs through New Caſtile, Eſtremadura and Portugal, and falls into the ocean near Liſbon.

4. The antient Anas, or Anus, now Guadiana, ſprings from certain lakes, about twelve miles from Moutieil, in New Caſtile, and having run weſtward about eight or ten leagues, ſinks under ground, and continues its ſubterraneous courſe about ſeven or eight leagues more, and then appears again near a village, called Daymiel in another lake, and having continued its courſe a conſiderable way, ſinks twice under ground again, till having croſſed the province of Eſtremadura and part of Portugal, it diſcharges itſelf into the ocean at Ayamonte, between Algarve and Andaluſia.

5. The Bætis, now Guadalaquivir, which, in the Arabic language, ſignifies the Great River, riſes among the mountains of Segura, bends its courſe ſouth-weſt, and receives ſeveral rivers, till, a little below Seville, it divides itſelf into two branches, and forms a kind of ſmall iſland, on which ſtood the ancient town of Tarteſſus. This river is alſo famous for the excellency of its waters, for dreſſing and dying wool and woolen-cloaths. It empties itſelf into the ſea with ſuch velocity, that the noiſe is heard at a great diſtance.

Spain being a country of great extent, the degrees of heat and cold differ very much between the northern and ſouthern parts of it, not only on account of the difference of their latitude, but likewiſe from other circumſtances. The months of June, July and Auguſt, are generally exceſſive hot in the more ſouthern parts, at leaſt for four or five hours in the middle of the day, and excepting thoſe months, the reſt of the year is delightful and temperate. The northern parts being more mountainous, are ſubject to ſevere froſts, rain, and other inclemencies during the winter ſeaſon. But upon the whole, the country in general is as pleaſant and healthy as any in Europe.

The mountains of this kingdom are covered with tall trees, of ſeveral ſorts, either for timber or fuel: the rocky parts with wild thyme, marjoram, and other aromatic herbs, which ſerve to feed an infinite number of goats and ſheep, and render their milk and fleſh more ſweet than any that is fed on the richeſt paſtures. There are mountains in Spain which produce great quantities of a plant, called by the Spaniards, Eſparto, of which they make all kinds of ropes and cordage, and the boggy lands yield plenty of ruſhes, for mats and other uſes.

The vallies in this country, are in general exceeding fruitful, and produce wheat, perhaps the very beſt in Europe; barley in ſuch abun-

abundance, that it is the common grain for their horſes and mules inſtead of oats, which are very ſcarce. They have likewiſe wine in great plenty, and exceeding good, ſuch as Malaga, Sherry, Galicia, Alicant, Barcelona, and many other kinds not inferior to theſe.

The oil, wax, and honey of this country are allowed to be exceeding good, and few countries exceed this for plenty, goodneſs, and variety of fowl, both wild and tame, and of four-footed game.

The chief manufactures of this country are ſilk, wool, iron and copper; but theſe are not ſo conſiderable as might be expected, owing chiefly to the indolence of the inhabitants, and their want of hands.

PORTUGAL, which is three hundred miles in length, and one hundred in breadth, between 7° and 10° weſt longitude, and between 37° and 42° north latitude, is bounded on the eaſt and north by Spain, and on the ſouth and weſt by the ocean, and contains ſix provinces: 1. Entre Duero e Minho. 2. Tralos Montes. 3. Beira. 4. Eſtremadura. 5. Alentejo, and 6. Algarve.

Entre Duero e Minho contains the ancient city of Braga, an archbiſhopric; the city of Oporto; the towns of Guimaraines, Viana, Ca-

Caminha, Valenza, Monzoa and Ponte de Lima.

Tralos Montes contains the cities of Braganza, and Chaves, and the towns of Miranda, Villareal, Villa Floor, and Freixo de Eſpadacinta.

Beira contains the city of Coimbra, Larnego, Viſca, and Guarda, and the towns of Aveiro, Caſtel Rodrigo, Panhel, Almayda, Cavillano, and Montemor.

Eſtremadura in Portugal, contains only two cities, Liſbon the metropolis of all Portugal, and Leria. Other towns of note in this province are Setubal Santarem, Aleazar del Sal, Tomar, Abrantes, Torres Novas, Torres Viedras, Villa Franca, and ſome others of leſs note.

Alentejo, or Entre Tajo e Guadiano, contains four cities, Evora, or Ebora, an archbiſhopric; Portalegre, Elvas, and Beja. The towns of note are Villa Vitioſa, Eſtremos, Aviz, Olivenza, Moura, Serpa, and Campo Major.

Algarve contains the cities of Silves, Tavira, Lagos, and Faro. As for the towns of this province, they are ſcarcely worth mentioning; the largeſt of them is Laule, which contains eight hundred inhabitants.

There

There are three univerſities in Portugal, which are thoſe of Liſbon, Ebora, and Coimbra; the archbiſhoprics are alſo three, Liſbon, Braga, and Ebora; and the biſhoprics are ten in number.

The moſt remarkable rivers have been mentioned in the account of Spain; and next to them the moſt conſiderable are,

1. Mondego, anciently famed for its golden ſand. 2. Limia, the famous Lethe of the Greeks and Oblivion of the Latins, runs into the ſea near the city of Viana. 3. Sadao, which makes a ſpacious bay at St. Ubes, in the province of Alentejo. 5. Leza, formerly Celandes. 6. Ave. 7. Cavado. 8. Zezere. 9. Alba. 10. Goa. All of which run from eaſt to weſt, and empty themſelves in the Atlantic ocean.

The air of this country is reckoned not ſo good as that of Spain, though generally cooler, owing to the refreſhing breezes from the ſea.

The ſoil of Portugal is the very worſt of all Spain, and never produces corn ſufficient to ſupply its inhabitants. Paſture is no leſs ſcarce, and the cattle in general few in number, ſmall and lean, though the fleſh generally good. But to make amends in ſome meaſure for theſe deficiencies, here are made vaſt quantities of wine, which is indeed the beſt commodity in

the kingdom. Oil is here likewiſe in great abundance, but much inferior to that of moſt other nations. Lemons and oranges grow here in great plenty, but are not ſo good as thoſe of Seville; nor indeed are any of their fruit, whether raiſins, figs, almonds, cheſnuts, &c. either ſo large or ſo good as thoſe of Spain.

SECT.

SECT. II.

A particular Account of the moſt curious natural Productions of Spain *and* Portugal, *in the Animal, Vegetable, and Foſſil Kingdoms; of remarkable Mountains and Caverns; of Medicinal and other ſingular Springs; of Lakes, Whirlpools, and other natural Objects of Curioſity.*

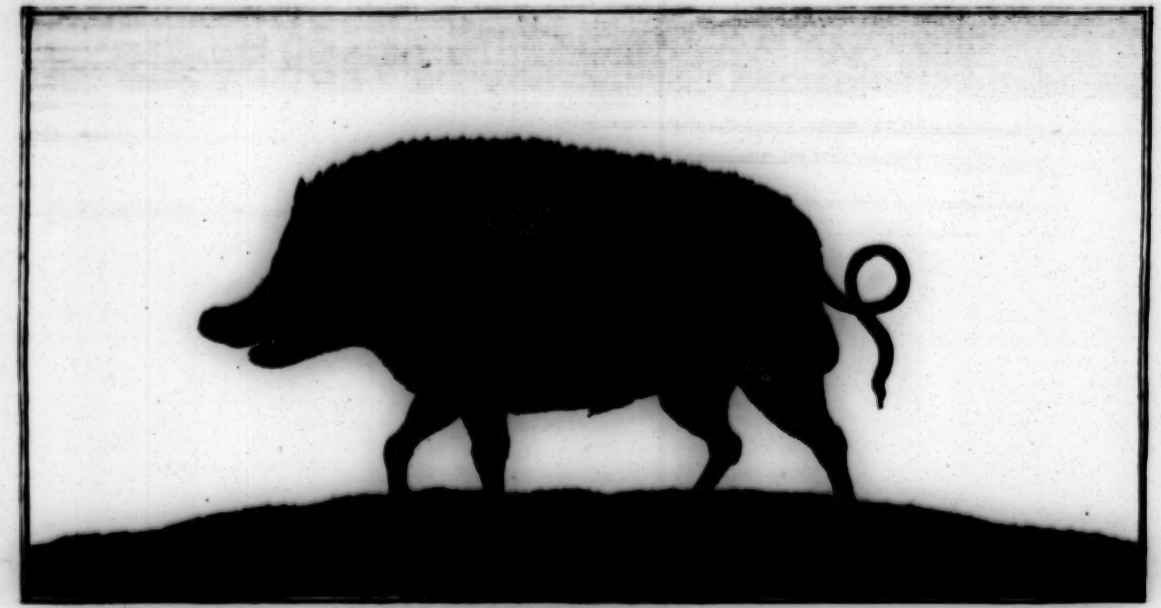
ANIMALS.

ONE of the moſt remarkable animals found native in Spain and Portugal, is the Buffaloe, or wild Bull. This is a ſpecies of the *Bos*, or ox kind, with very large, crooked and reſupinated horns. The characters of the genus are well known, and are thus diſtinguiſhed by natural hiſtorians. The horns of the ox are hollow, and turned forward; they are of a lunulated figure, and a ſmooth ſurface; the fore teeth are eight in number, and there are no canine teeth.

The buffaloe is a large ſpecies of the ox kind: it is equal in ſize to our biggeſt oxen; the head is very large, the forehead remarkably broad, and the aſpect very fierce and terrible; their eyes are large and prominent; the ears are large, long, and patulous: the horns are

vaſtly large, of a coal black colour, and intorted: they are very thick at the baſe, but ſharp at the point; the neck is thick, and remarkably ſhort; the fleſh hangs very looſe under the throat; the body is more bulky in proportion than in our bull; and the legs are thicker, but about equal in length. The colour is uſually a blackiſh grey: but in this there is a great variation; there is uſually ſome white under the belly, and about the forehead. The buffaloe is originally a native of the eaſt, but has been introduced into ſome parts of Europe, where it is kept for ſervice. In ſome places it is a beaſt of burden and draught, and the milk of the females is uſed as that of our cows. But it is apt to be miſchievous, and is leſs fit to be truſted looſe in the field where people walk.

The wild boar, or hog, is alſo a native of theſe kingdoms; and being no other than the common hog in its wild ſtate, a deſcription of it may appear impertinent and ſuperfluous; though the creature in its native wildneſs is often, in many reſpects, unlike thoſe of the ſame ſpecies, which are kept about our houſes, ſo much indeed that authors have diſtinguiſhed the wild hog and the tame one as diſtinct ſpecies. The generical characters of the *Sus*, or hog kind, are as follow; the upper teeth are four in number, and are convergent; thoſe of the lower jaw are eight, and are patulous; the canine teeth of the upper jaw are two, and they



The Wild Boar.

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they are ſhort; thoſe of the under jaw are ſingle, and they are exerted: the crown of the head is carinated, and the hoof is divided.

The wild hog is fond of mountainous places, and generally lives in thick woods; its body is covered with two kinds of hair, a longer and a ſhorter, much more diſtinguiſhable than in the tame hog.

The Spaniſh ſheep, particularly about Segovia, in Old Caſtile, are famous all over Europe for the fineneſs of their wool, and the Spaniſh horſes have been always celebrated for their ſwiftneſs and beauty: but however excellent the Spaniſh horſes may be, the Spaniards have been long accuſtomed to breed a great number of mules, which, though not ſo ſwift, are much larger and ſtronger. The mule is a mongrel kind of quadruped, uſually generated between an aſs and a mare; and ſometimes between a horſe and a ſhe-aſs. It is therefore a ſort of monſter, of a middle nature between its parents, and upon that account incapable of propagating its ſpecies; ſo careful is nature to avoid filling the world with monſters.

Mules are chiefly uſed in countries where there are rocky and ſtony roads, as about the Alps, Pyrenees, &c. Great numbers of them are kept in theſe places; they are uſually black, ſtrong, well limbed and large, being

moſtly bred out of the fine Spaniſh mares: the mules are ſometimes fifteen or ſixteen hands high. No creatures are ſo proper for carrying large burdens, and none ſo ſure-footed. They are much ſtronger for draught than our horſes, and are often as thick-ſet as our dray-horſes; and they will travel ſeveral months together, with ſix or eight hundred weight upon their backs: they are much hardier and ſtronger than horſes, and will live and work twice the age of a horſe; and thoſe mules which are light are fitter for riding than horſes, as to the walk and trot; but they are apt to gallop rough.

The Cantharides is a native of Spain, whence it is uſually known in England by the name of the Spaniſh fly, though the inſect is frequent in France and Italy. It is a genus of four-winged flies, with ſetaceous antennæ, the exterior wings of which are flexile, the thorax ſomewhat flatted, and the ſides of the abdomen plicated.

The cantharides is properly of the ſcarabæus, or beetle-kind: the creature is uſually about half an inch in length, and a third of an inch, or ſomewhat leſs, in breadth: it is of a fine ſhining and beautiful colour, on the upper ſide a bright green, with a mixture or ſhade of gold yellow. From the eggs of the parent cantharides, are hatched a ſmall kind of worms, of a duſky colour, with ſix legs; and from theſe

theſe worms are afterwards produced the cantharides, as the butterflies are from the caterpillars: being taken and ſuſpended over the fumes of vinegar, they are expoſed to the ſun to dry, and then ſold to the druggiſt *.

* The principal uſe of the cantharides, at this time, is external, in making of bliſters. We have a tincture of cantharides in the ſhops, that is reputed an excellent medicine. It is diuretic, and emmenagogue, and has been given in the gout with ſucceſs.

To prepare the tincture of cantharides, take two drams of bruiſed cantharides, half a dram of cochineal, a pint and a half of proof ſpirit; digeſt them together in a ſand-heat, then filter the tincture for uſe.

VEGE-

VEGETABLES.

AMONG the moſt curious vegetables which grow native in Spain and Portugal, and which, though cultivated in England with much pains and care, never arrive at perfection, is the orange tree. This plant grows in great abundance all over the country, wearing a continual verdure, and bearing at the ſame time a fragrant bloom of flowers, and a diverſity of fruits: ſome in their infant ſtate, and others in their full maturity.

The *Aurantium*, or orange-tree, according to the ſyſtem of Botany invented by Linnæus, is a ſpecies of *Citrus*, or citron-tree, the generical characters of which are as follow. It is a genus of the order of the Icoſandria, belonging to the Polyadelphia claſs, being the ſecond order of the eighteenth claſs. The calyx is a very ſmall deciduous perianthium, formed of one leaf, plane at the baſe, and divided into five denticulations at the top. The corolla conſiſts of five oblong, plane, patent petals. The fruit is called a berry, covered with a thick fleſhy rind; the pulp being formed into veſicles, and having nine cells, in each of which there are two ſeeds, of a ſuboval figure and callous ſubſtance.

Of

Of this genus Linnæus diſtinguiſhes no more than two ſpecies, viz. Citrus with linear petioles, comprehending the citron and lemon-trees. 2. Citrus with winged petioles, or the orange-tree: the citron, lemon, and orange-trees were reckoned three diſtinct genera of plants by former botaniſts, though Linnæus reckons them but two ſpecies of the ſame genus, by making the lemon-tree only a variety of the citron-tree; the firſt of theſe ſpecies is originally a native of Media, Aſſyria, and Perſia, and the ſecond ſpecies of India; they were firſt brought into Europe by the Portugueſe; and it is ſaid, that the very firſt China orange-tree, which was ſo called from having been originally brought from China, and from which variety of the orange-tree, all the European trees of the ſame ſort have been propagated, is ſtill preſerved at Liſbon; however that may be, the trees of this genus are found to be the longeſt lived plants, perhaps, of any other; ſeveral of them having been kept in gardens between two and three hundred years, and even then retaining the appearance of their youthful vigour. There are ſeveral varieties from each of the two ſpecies; and the city of Seville in Spain gives name to a variety of the orange-tree, which is celebrated for the agreeable acidity of its juice.

The culture and management of both ſpecies are the ſame. The manner of raiſing the orange-tree from ſeeds is as follows; if you purpoſe to raiſe ſtocks for budding of oranges, they

they ſhould be raiſed from citron ſeeds taken out of the rotten fruit in ſpring, for the ſtocks of this kind are preferable to any other, both for their quickneſs of growth, and their readily taking buds either of oranges, lemons, or citrons. A good hot-bed muſt be prepared, either of horſe-dung or tanners-bark. The laſt, where it can be had, is much the beſt; the ſeeds muſt be ſown in pots of rich earth, and theſe, when the bed is of a due temper, muſt be plunged into it. The pots muſt be watered frequently, and the glaſſes of the hot-bed ſhaded with mats in the heat of the day, and at times raiſed to give air. The ſeeds will come up in three weeks, and a month after this the plants will be fit to tranſplant into ſingle pots. The bed muſt be now renewed, and ſome pots of about five inches over at the top, muſt be filled half full with freſh earth, mixed with very rotten cow dung. Place one plant in the middle of each of theſe pots, and then fill it up with the ſame earth; then place theſe pots in the new hot bed, and water the plants every day. By July, the plants will be two feet high, and muſt then be hardened by degrees to the air, by raiſing more and more the glaſſes of the hot-bed. In September, they muſt be taken into the green-houſe; in the winter-ſeaſon they muſt have frequent ſmall waterings, and in ſpring their heads muſt be waſhed, to cleanſe them from filth. In ſpring they muſt again have a gentle hot-bed, but in June they muſt be hardened again; and in Auguſt they will be fit to bud.

At

At this time you are to make choice of cuttings from very thriving and fruitful trees; chuſing ſuch buds as are round. When the ſtocks are budded, they muſt be removed into the green-houſe, to ſhelter them from wet, turning their buds from the ſun, but letting them have as free air as poſſible, and refreſhing them often with water. They muſt remain in the green-houſe all winter, and in the ſpring, muſt have another bark hot-bed; then cutting off the ſtocks about three inches above the buds, obſerve to give them as much water as they require. The buds with this management will be by July three feet high, and they muſt then be hardened by degrees, that they may bear the green-houſe in the winter; and as this will be a ſufficient height for the ſtems, it is proper at this time to ſtop the leading branch to force out lateral ſhoots. This firſt winter they will be tender, and muſt be taken great care of, and after this they require no more care than other full grown trees.

It is a regular and certain way of ſupplying a green-houſe with orange-trees, but there is a much more expeditious one, which is the purchaſing ſuch trees as are brought over every year from Italy. Theſe are as large when we receive them, as thoſe of our own produce will be in ten or twenty years growth; and though they have but ſmall heads then, will be brought to have very good ones in three years, and to produce very fine fruit. In the choice of theſe trees, thoſe which have two buds

buds in ſtock are preferable to thoſe which have only one; and the ſtraitneſs of the ſtem, freſhneſs of the branches, and plumpneſs of the bark, are greatly to be regarded. When you have purchaſed a proper number of theſe trees, each of them is to be ſet in a tub of water, with its head and half its trunk above the ſurface; they are to ſtand in this three days, then they are to be taken out, their roots picked, and bruſhed clean, and the tops of the branches cut off, and they are to be planted ſingly, in pots juſt large enough to contain their roots, in a mixture of freſh earth and rotten cow-dung. Theſe are to be ſet in a moderate hot tanners bark-bed, and ſome potſherds muſt be always put at the bottom of the pots, to keep their holes from being ſtopped, and give a free paſſage to the water. They are to be moderately watered at proper times, and by the month of June they will ſhoot out pretty long ſhoots, which muſt be ſtopped, in order to produce the lateral branches. They muſt now be hardened by degrees, and in the middle of July muſt be brought into the open air, in ſome warm ſituation, defended from winds, and from the too great heat of the ſun. In September they muſt be removed into the green-houſe, and watered gently during the winter. In the ſucceeding ſummer, the branches muſt be ſtopped from growing to their lengths, to furniſh a good head; and they muſt be frequently watered. And after this, they will require no farther management, but to be new potted every

every year; which ſhould be done in April, and the earth prepared for it a year beforehand, of cow-dung and freſh earth. The roots ſhould be ſoaked a quarter of an hour in water, and afterwards ſcrubbed very clean, before they are put into the new pot.

If old orange trees have bad heads, the way to mend them is to cut them mostly off, and proceed with them in the ſame manner as with the trees brought from Italy.

All orange-trees require frequent waterings, but theſe ſhould not be large; there muſt always be a paſſage for the water to run off at the bottom of the pot or tub; they muſt have as much freſh air in winter as the ſeaſon will allow, and they ſhould not be placed too near each other in the green-houſe. In ſummer they ſhould be placed where they may have the morning and evening ſun, without too much wind; and they ſhould not be houſed till October.

The beſt compoſt for orange-trees is two thirds of freſh earth from a good paſture, which ſhould not be too light nor over ſtiff, but rather a hazle loam: this ſhould be taken about ten inches deep with the ſward, which ſhould be mixed with the earth to rot, and one third of neats dung: theſe ſhould be mixed together at leaſt twelve months before it is uſed, obſerving to turn it over every month, to mix it well, and to rot the ſward; this will alſo

break the clods, and cauſe the mould to be finer. Before you make uſe of this earth, you ſhould paſs it through a rough ſcreen, to ſeparate the great ſtones and the roots of the ſward therefrom: but by no means ſift the earth too fine; for this is very prejudicial to moſt plants, but particularly to orange-trees.

It was before ſaid, that the ſame method may be uſed in cultivating both ſpecies; but it muſt be obſerved, that the citron and lemon trees are much tenderer than the orange, and ſhould therefore have a warmer ſituation in winter.

The Pomegranate-tree is a native of Spain and Portugal, as it is alſo of Italy and Africa. This is the *punica* of botaniſts, and is a genus of plants of the order of the monogynia, belonging to the icoſandria claſs, according to the ſyſtem of Linnæus; being the firſt order of the twelfth claſs of that celebrated botaniſt. The calyx is a permanent perianthium, conſiſting of a ſingle, coloured, bellſhaped leaf, divided into five ſegments at the edge; the corolla conſiſts of five roundiſh, erect, patent petals, inſerted into the cap: the fruit is a large globoſe apple, coronated with the calyx, and formed into nine cells: the ſeeds are numerous, roundiſh, and ſucculent; the receptacle is membranaceous, and divides every cell of the fruit into two parts.

There

There is but one ſpecies of this genus, of which there is a variety with double flowers, called Balauſtia. The pomegranate tree may be eaſily propagated, by laying down the branches in the ſpring, which in one year's time will take good root, and may then be tranſplanted where it is deſigned to remain. The beſt ſeaſon for tranſplanting theſe trees is the ſpring, juſt before they begin to ſhoot; they ſhould have a ſtrong, rich ſoil, in which they flower much better than if planted in a dry poor earth. They ſhould be planted againſt warm walls, in a good ſituation. The flowers of this tree always proceed from the extremity of the branches, which were produced the ſame year: this therefore directs that all weak branches of the former year ſhould be cut out, and that the ſtronger ſhould be ſhortened in proportion to their ſtrength, in order to obtain new ſhoots in every part of the tree. Though the fruit of this tree ſeldom arrives to any degree of perfection in England, ſo as to render it valuable, yet for the beauty of its ſcarlet-coloured flowers, together with the variety of its fruit, there ſhould be one planted in every garden, ſince the culture which it requires is not great. The flowers of the pomegranate-tree and the bark of the fruit are uſed in medicine, and are reckoned great aſtringents.

The Almond-tree deſerves to be mentioned among the native vegetables of Spain and Portugal, though it is not peculiar to this ſoil,

but alſo grows naturally in Barbary. This tree, which is the *amygdalus* of botaniſts, conſtitutes a diſtinct genus of plants, of the order of the monogynia, belonging to the icoſandria claſs: being the firſt order of the twelfth claſs, according to the ſyſtem of Linnæus. The calyx is a deciduous perianthium, formed of a ſingle leaf, of a tubulated figure, and divided into five obtuſe patent ſegments; the corolla conſiſts of five petals, of an oblong oval figure, obtuſe, hollow, and inſerted into the cup; the fruit is a great, hairy, roundiſh drupe, with a longitudinal furrow; the ſeed is an oval compreſſed nut, with the ſutures prominent on each ſide, with netted furrows, and punctated with holes.

Of this genus Linnæus diſtinguiſhes only three ſpecies. 1. Amygdalus, with all the ſerratures of the leaves acute, or the peach tree. 2. Amygdalus, with petiolated leaves, and the lower ſerratures glandulous, being the common almond-tree. 3. Amygdalus, with petiolated leaves, attenuated at the baſe, or the Dwarf almond-tree. The peach-tree being commonly cultivated in the Engliſh gardens, it becomes improper here to enlarge upon its numerous varieties, of which the curious diſtinguiſh no leſs than forty, or its method of culture. The common almond-tree is propagated by inoculating its buds into a plumb, almond, or peach ſtock, in the month of July; the next ſpring, when the buds ſhoot, they may be trained up for ſtandards, though

though the uſual method is to bud them to the height the ſtems are intended to be; and the ſecond year after budding, they may be removed to the places where they are to remain. The beſt ſeaſon for tranſplanting theſe trees into dry ground is October, as ſoon as the leaves begin to decay: but for a wet ſoil, February is much preferable. Bud upon plumb ſtocks for wet, and upon almonds or peaches for dry ground. The third ſpecies grows naturally in the north of Aſia. The roots of this ſort put out ſuckers, by which it may be propagated in great plenty; but if theſe are not annually taken away, they will ſtarve the old plants, as theſe ſuckers are too apt to creep at the root, and put out other ſuckers. Thoſe plants which are propagated by layers, are much preferable.

Almonds are of two kinds, ſweet and bitter, both of which are uſed in medicine: the ſweet almond is of a ſoft grateful taſte, and reputed cooling, healing, emollient, and nutritive. There is an oil drawn from it by expreſſion, which is a ſafe and uſeful remedy in nephritic pains; and in hoarſeneſs, coughs, aſthmas, phthiſis, and all diſorders of the breaſt, it is highly beneficial. The bitter almond is ſeldom eaten, but affords a proper medicine on many occaſions; being of a ſtimulating detergent, aperient, and diuretic quality. Hoffman very much recommends the uſe of bitter almonds to prevent the generation of the ſtone, for which purpoſe he would have

three or four of them eaten every morning. It is ſcarce credible, he ſays, how beneficial they are in all calculous diſpoſitions, ſince they expel the urine and bring away the ſand, from whence the ſtone is produced, as he has found by frequent experience. Some eſteem them good to be taken before drinking, in order to prevent intoxication, which is ſaid to have been the practice of the Emperor Claudius: and Plutarch relates, that a certain phyſician, a great drinker, uſed to take down five bitter almonds at every cup, to allay the heat and fumes of the wine.

A deſcription of the vegetable productions of theſe countries that deſerve mention, would ſwell this head greatly beyond the bounds which muſt confine it; but it is, however, proper to take notice of a ſpecies of Ilex, called, the Holm-oak, or Ever-green-oak, which grows naturally in Spain and Portugal, as well as Languedoc in France, remarkable for a ſort of huſk or berry, called Kermes, and Scarlet Grain, found adhering ſometimes to its leaves, but generally to its ſtem or branches. It is of a ſpherical figure, as large as a pea, ſmooth, ſhining, and full of a mucilaginous juice of a beautiful red colour, of conſiderable uſe in medicine and in dying ſcarlet. After the moſt diligent enquiries of naturaliſts into the production of this grain, it is found to be the neſt of a ſmall inſect or worm, which, according to the arrangement of Linnæus, is a ſpecies of coccus; and which, pricking the bark

or leaf, in order to depoſit its eggs, raiſes a little tumour or bliſter, which, by degrees, fills with a red pulp, impregnated with the numerous progeny of that animalcule *. Hence, when the berry is dried, there comes out of it a prodigious number of little flies, ſo minute that they are ſcarce diſcernible, inſomuch that the whole inward ſubſtance ſeems converted into theſe inſects; to prevent which, the Kermes is uſually ſteeped in vinegar. The berries are of a vinous ſmell, and of a rough bitter taſte, which indicates their corroborating

* Mr. Derham, ſpeaking of the nidification of inſects, admires the wonderful art or faculty which ſome of thoſe ſmall animals have, of making the vegetation and growth of trees and plants the very means of building their little cells or neſts, ſuch are the galls and balls found on the leaves and branches of divers vegetables, as the oak, the willow, the briar, and ſome others. This he adds, is ſo far out of the reach of any mortal underſtanding or power, that if we conſider the matter, we muſt needs perceive manifeſt deſign, and the concurrence of ſome great and wiſe Being, that hath from the beginning provided for the good of the animal. The manner of the production of galls on oaks and other vegetables is well deſcribed by Malpighi in an expreſs treatiſe on that ſubject, and his obſervations are confirmed by Mr. Derham. They are occaſioned, according to theſe ingenious naturaliſts, by a certain fly, which makes a puncture to the very heart of the tender germ or bud, and there depoſits an egg or more, injecting at the ſame time, a ſort of venomous

ing quality, and their fitneſs to correct the aceſcent humours. In a word, they are cardiac, deſiccative, aſtringent, fortify the ſtomach, and prevent abortion. They yield abundance of volatile ſalt, which M. Marſigli thinks would have a better effect in medicine if taken in a liquid, than when incloſed in conſerves and confections, which hinder its action. Thus much for the vegetables of Spain.

mous liquor, by which the regular vegetation is obſtructed, and the ſap that was to nouriſh the young branch, is diverted into the teguments of the bud, which, by this means, grow large and form a covering for the incloſed inſect, as they were before for the tender branch and its appendage. The maggot thus impriſoned, is at length transformed into a fly, which pierces through the incloſure, and expatiates at full liberty in the open air. In the ſame manner are the little excreſcences produced on the leaves of nettles, ground-ivy, and other plants; the parent-inſect, with its ſtiff ſetaceous tail, piercing the rib of the leaf, and laying its egg in the very pith or heart of it, together with ſome proper juice to pervert the regular vegetation: and from theſe balls or tumours, iſſues a beautiful fly, when arrived to a ſtate of maturity. The Aleppo galls, uſed in dying, making ink, &c. though hard as ſhells, are no other than the caſes of inſects bred in them after the manner above deſcribed, and which gnaw their way out through the little holes obſervable in the galls. Of theſe inſects ſee an account in *Phil. Tranſ.* N° 245.

FOS-

FOSSILS.

FROM the bowels of the mountains of Spain and Portugal, are dug a variety of minerals, particularly iron, copper, lead, quickſilver, alum, and calamine: here are quarries of marble of ſeveral ſorts, and in the mines of theſe countries are found the agate, granate, jaſper, and other precious ſtones. Here have been gold and ſilver mines, formerly wrought with great ſucceſs; and the river Tagus was famous for its golden ſand, as appears from the writings of Pliny, Ovid, and Mela: but more particularly from that celebrated antiquary Reſendius, who was a witneſs of it; he ſays, that the laws of Portugal prohibited throwing up the interior ſand of that river on the banks, and that the kings of that country had a ſceptre of the gold found in the Tagus, than which no purer was to be found in the world. As to the gold and ſilver mines of theſe countries, they have either been exhauſted by the Romans, Carthaginians, and other nations, or neglected by the inhabitants, ſince they have been able to draw ſuch vaſt quantities of thoſe rich metals out of their American dominions. Of all the mines in Spain and Portugal, thoſe therefore are the moſt valuable which furniſh the inhabitants with iron and quickſilver, of both which they have great plenty. Their iron is excellent, particularly that which is dug out of the mountains

of

of Biſcay, whereof large quantities are ſent to moſt parts of Europe, as well as manufactured at home. Some ſay the Spaniſh iron is the beſt in the world, but the Swediſh iron has generally the preference, becauſe the Spaniſh is apt to red-ſear, as they call it, that is, to crack between hot and cold.

Quickſilver, or mercury, is a mineral fluid matter, cold to the touch, of a ſhining ſilver colour, very heavy, volatile, and which will unite with moſt metals, eſpecially gold, to which it joins itſelf very cloſely. It is ſometimes found in its fluid form in the bowels of the earth, and is then called Virgin Mercury; but it is more uſually found in glebes, ſometimes very hard and ſtony, of a ruddy, yellow, or blackiſh colour; or elſe in form of a red ſulphureous mineral called Cinnabar. To ſeparate the mercury from the ore or earth, the uſual way is to grind the glebe to powder, mix it with water, and ſtir it briſkly about till the water becomes very thick and turbid. When it has ſtood a while to ſettle, the water is poured off, and freſh water put on, and the maſs ſtirred and worked as before; and this is repeated till at length the water comes away perfectly clear, leaving the mercury and other metallic and ſtony matter at the bottom of the veſſel. To this matter they add the ſcoria of iron, and diſtil it in large iron retorts, by which the mercury is ſeparated from all the heterogeneous parts.

The

The Agate, which is alſo found in Spain, is a precious ſtone, partly opake, and partly tranſparent, uſually diverſified with various colours, veins, and ſpots, which ſometimes repreſent trees, animals, fruits, flowers, and other natural objects *. There are various kinds of agates, which have different names, according to their different colours, and degrees of tranſparency; of which the Sardian and Sardonyx are the moſt valuable The agate, eſpecially the Sardian or Cornelian, has always been eſteemed for ſeals, being a ſtone that no wax will ſtick to, that graves well, and takes a fine poliſh. Several medicinal virtues have been aſcribed to this ſtone, which ſeem to be all imaginary.

The Granate, or Garnet, as it is commonly called, is a gem of a red colour, reſembling that of the kernel of a pomegranate, from whence its name. Granates are diſtinguiſhed into oriental and occidental; the former brought

* De Boot, in his Hiſtory of Gems, mentions an agate, the ſize of a man's nail, wherein a biſhop with his mitre was very well repreſented; but by turning it a little, there appeared the heads of a man and woman. M. du Fay, in the Memoires of the Royal Academy of Sciences, has given us the art of ſtaining agates, with divers beautiful colours; and he afterwards obſerves, that the figures and ramifications upon theſe ſtones, whether natural or artificial, may be diſcharged with Aqua-fortis. Mr. Boyle takes notice, that fire will purge away the colour of agate.

from

from ſeveral parts of the Eaſt-Indies, the latter found in Spain, Bohemia, and Sileſia; of which laſt ſort, thoſe of Bohemia are moſt valued, and by ſome preferred to the oriental kind. This ſtone, reduced to powder, and taken internally, is ſaid to cure palpitations of the heart, to reſiſt melancholy, and ſtop hæmorrhages; and ſome believe it has the ſame effect if ſuſpended about the neck.

Jaſper is a precious ſtone not much different from the agate, except that it is more opake, ſofter, and does not take ſo good a poliſh. The florid jaſper, found in the Pyrenees, is uſually ſtained with various colours, though ſome have only one colour, as red or green; but theſe are leaſt eſteemed. The green ſpotted with red is now moſt valued; in the next place, that which borders on a purple colour, or that of a carnation. Almoſt the ſame virtues are aſcribed to this ſtone as to the granate, and perhaps with equal foundation.

To theſe may be added another ſtone, though not of the precious kind, which is dug up in Spain, and ſeveral other parts of the world, viz. the Hæmatites, or Blood-ſtone: this is a ferrugineous, ponderous, hard, metallic ſubſtance, of a red, blackiſh, and ſometimes an iron colour, and of an earthy aſtringent taſte. Some of theſe ſtones have an uneven and angular ſurface, as thoſe that are found in Spain, which are reckoned the beſt in Europe; others

are

are cluſtered on the ſurface, like bunches of grapes, as thoſe brought from the Hercynian foreſt in Germany; and others are formed like inteſtines, or the outer ſurface of the brain, in various convolutions. This ſtone, reduced to a fine powder, has been uſed in all ages to ſtop hæmorrhages, ſpitting of blood, and to dry and heal ulcers in the lungs. It is alſo found very effectual to promote the menſes.

The Salt-Mines in the mountains of Catalonia, belonging to the Duke of Cardona, one of the richeſt grandees in Spain, deſerve to be mentioned under this article. The ſalt dug out of them is of four kinds, white, bay, red, and brilliant; which are found in diſtinct ſtrata, one above another. The firſt is like our ſea-ſalt, only it is not granulated. The ſecond is of an iron and ſlate colour, but has moſt of the qualities of the white. The third only differs from the reſt by the mixture of ſome bole or earth, which gives it the colour of a roſe. And the fourth ſort, though brilliant, is tranſparent as cryſtal, which is the proper *ſal-gemmæ* of the druggiſts. This laſt kind will become red hot in the fire, like iron, but eaſily diſſolves in water: yet the druggiſts waſh it, to give it the greater luſtre, taking care to wipe it dry again immediately.

REMARKABLE MOUNTAINS, LAKES, SPRINGS, RIVERS, CAVERNS, and other NATURAL OBJECTS of CURIOSITY.

THE moſt celebrated mountains of Spain are the Pyrenees, which ſeparate this kingdom from France, and of which ſome account has been given among the remarkable mountains of that country *. From the Pyrenees, ſeveral chains of mountains branch out, and extend themſelves through great part of Spain and Portugal; the moſt remarkable of theſe mountains, are the Aſturian and Biſcaian mountains; and thoſe of Andaluſia and Granada are famous for their mineral treaſures, and their medicinal waters, whoſe healing virtues many have experienced. The moſt conſiderable mountains in Portugal, are the Eſtrella, which run from north to ſouth, between the provinces of Beira and Tralos Montes. In this mountain is a noble lead mine; and on the top of it are two lakes of a vaſt extent, and ſo deep, that one of them, in particular, could never be fathomed: but what is ſtill more extraordinary in theſe lakes, is, that they are calm when the ſea is calm, and rough when the ſea is ſtormy; from whence it is conjectured, that they have a ſubterranean communication with the ocean, though no leſs

* See Vol. IV. p. 185.

than

than 40 miles diſtant from it; which conjecture ſeems to be confirmed by the wrecks of ſhips which are now and then thrown up by them.

Near Roya, in Portugal, is another extraordinary lake or pool, which is ſaid to make a hideous rumbling noiſe, like that of thunder; and uſually before a ſtorm, is heard at the diſtance of eighteen or twenty miles. Near the river Mondego, about twenty-four miles from Coimbra, is a celebrated pool, called, Ferventia, and mentioned by Pliny, which is ſaid to abſorb any thing thrown into it, though ever ſo light, as wood, feathers, ſtraw, cork, or any ſuch light ſubſtances, which ſink down gradually, as they are thrown in, and never riſe again in the ſame place: and not far from this, there was a ſpring, according to Pliny, equally remarkable for a contrary quality, which was that of ſpewing up all that was thrown into it: but if ever their was any ſuch ſpring, it is not now to be found in this country.

Near Eſtremos, in Portugal, is a ſpring, which petrifies wood, or rather covers it with a caſe of ſtone: but the moſt ſurprizing circumſtance is, that it throws up water enough in ſummer, to turn ſeveral mills, whereas it is quite dried up in the winter. Of this kind is the ſpring, which ſupplies the river Lambourne, in Berkſhire, of which mention has been made in another part of this work *. In

* See Vol. I. p. 118.

the kingdom of Portugal, are ſeveral mineral and medicinal ſprings, of great virtue, and much reſorted to; ſome of a hot, and others of a cold nature. One in particular of the hot kind, ſtands about forty-five miles north of Liſbon, and has an hoſpital built near it, for the reception of the poor, who come to drink the waters, with a phyſician, apothecary, and ſurgeon, and proper attendants. There are ſeveral other hot ſprings in this kingdom. The hot bath of St. Peter, in Algarve, and ſome others, in the northern parts of Portugal, are much celebrated for their virtues.

The moſt famous hot ſprings in Spain, are thoſe of Seville, Cordoua, and Granada, which are ſaid to cure moſt chronical, and even venereal diſeaſes; which extraordinary effects are aſcribed to the minerals with which they are impregnated, their exceſſive heat, and the plentiful perſpiration occaſioned by that and the warmth of the climate; and near Antequera, in Granada, is a ſpring, the water of which is ſaid to diſſolve the ſtone in the bladder, and bring it away by urine.

The river Guadiana, about twenty-four miles from its ſource, is entirely ſwallowed up under ground, and, after a ſubterraneous courſe of about twenty miles more, riſes again in a lake, near a village, called Daymiel. From hence it takes the name of Guadiana, being called Ruydera, from its ſource to this place,

Place, and in its courſe from Daymiel, it ſinks twice under ground again, before it falls into the ocean. But this circumſtance of burying itſelf under ground, and riſing up again at a conſiderable diſtance, is not peculiar to the Guadiana, as will be found in the courſe of this work; and we have ſeen already an inſtance of the ſame kind at home, in the river Mole, in Surry, which ſinks underground at the bottom of Boxhill, in that county, and, after a ſubterraneous paſſage of ſeveral miles, appears again at Leatherhead *.

In the vale of Roncal, in the kingdom of Navarre, in Spain, are many large and capacious caverns, in which are found vaſt quantities of human bones, and ſome of them of a ſurpriſing magnitude; there are many relations concerning theſe bones, ſome of which are too romantic to deſerve any credit, and the reſt are founded on vague traditions.

Near Antequera, in Granada, are ſeveral remarkable caves, which are ſuppoſed to have been mines formerly, carried on by the Romans, and exhauſted of their metals; and near the ſame place, is a ridge of high rocks, which, at a diſtance, have the appearance of men, beaſts, and buildings, and are reckoned natural objects of great curioſity.

* See Vol. I. p. 117.

It is affirmed, that the neighbourhood of Terroſio, in Catalonia, whether from the quality of the air, or any particular virtue in the ſoil, is ſo ſalubrious, that it reſtores to their ſenſes, perſons who are raving mad; and it is affirmed of the iſland of Ivica, that it has no venomous creatures in it, and that none brought thither will live.

SECT.

Ruins of Lisbon as appeared immediately after the

ſter the EARTH QUAKE & FIRE, on the 1st Nov.r 1755.
taken on the Spot.

SECT. III.

An Hiſtorical Account of the moſt remarkable Earthquakes, Inundations, Fires, Epidemic Diſeaſes, and other public Calamities, which, at different times, have viſited the Inhabitants of Spain *and* Portugal.

SPAIN and Portugal have ſuffered much from earthquakes; but the moſt extraordinary earthquake of any recorded in hiſtory, and that which proved the moſt fatal to thoſe kingdoms, happened on Saturday the firſt of November, 1755. No other accounts can equal the dreadful effects of this concuſſion; the ſhocks having extended from north to ſouth, upwards of 2500 miles, with the utmoſt violence, and their effects upon the waters of the ocean, ſeas, rivers, and lakes, by throwing them into great agitation, having extended around more than 5000 miles. This earthquake ſeems to have begun in Greenland, where, we are told, there was a violent ſhock felt the beginning of November; thence it extended ſouthward, in almoſt a direct line, the eaſtern limits whereof were nearly at the diſtance of five degrees from the meridian of London, though indeed it was perceived at Portſmouth, and paſſing in that direction under the northern ocean, the iſlands of Trinity, Ferro, &c. ſome of the weſtern iſles of Scotland,

land, under Ireland, the Iriſh ſea, the ſouth-weſt part of England, * &c. it continued its progreſs under the ocean, the Engliſh channel, &c. to the Bay of Biſcay, &c. and ſhook all Portugal, and great part of Spain; whence it paſſed under the ſea to the continent of Africa, where, with incredible violence, it paſſed on in the ſame direction, through the kingdoms of Fez, Morocco, &c. till probably it vented itſelf in the ſouthern ocean.

That ſuch was the direction of this earthquake appears from the circumſtance of time wherein the ſame ſhock was felt in all the countries through which it paſſed. At a quarter after nine in the morning, this ſhock was felt at Cork in Ireland, and at Portſmouth, and ſome other places in Great-Britain; but probably lying very deep under the ſurface of the earth, it did no damage in Great Britain or Ireland. About half an hour after nine, the inhabitants of Oporto, in Portugal, were alarmed with a rumbling noiſe immediately preceding the ſhock, whereby the whole city was ſhaken; ſeveral chiminies, ſtones and croſſes thrown down, and ſome churches opened at top; here, it was one continued, regular trembling of the earth, and was the firſt ſpecies of earthquakes mentioned by Ariſtotle †; and had it been otherwiſe, it is thought the whole city muſt have been laid in ruins. The inhabitants were thrown into the utmoſt

* See Vol. I. p. 126.

† See Vol. I. p. 124. in the Note.

con-

confuſion, not knowing where to fly for preſervation; ſome making their way to the river, to get into boats, and on board ſhips, and others to other different parts, while ſome were ſo diſtracted with fear, that they did not know where they were going. Many remained on the middle of the ſtreet, leſt the houſes ſhould fall; ſome without hats, caps, &c. others without ſtockings or ſhoes, all in the greateſt conſternation that can be conceived. The horror of thoſe who ran to the river-ſide, was, if poſſible, greater than theirs who remained in the ſtreet; for, the river retiring about twenty yards from them, returned with a great violence and a horrid noiſe. Two large Brazil ſhips lying without the bar, the ſea roſe in one great wave, and brought them clear over the bar into the river, over places that before were dry, without any conſiderable damage, to the aſtoniſhment of the poor ſailors and pilots, who thought of nothing but immediate death. The ſea, after that commotion, ebbed and flowed till night, three or four feet in five or ſix minutes; the ſhips moved, ſome up the river, while others went down: ſeveral ſmall ſhocks were felt after this one, all day, but ſo faint as to be only juſt perceivable.

Some time after ten, the ſame ſhock was felt at Madrid, where it laſted eight minutes, but without doing any conſiderable damage, beſides ſhattering and ſplitting the ſteeples of ſome churches, and throwing the inhabitants into the utmoſt conſternation.

This

This ſhock was felt at Seville, juſt before ten: here it was ſo violent, that the inhabitants looked upon it as the day of judgment; all the churches were ruined, and the towers of ſome falling, killed a great number of people.

A few minutes before ten, the ſhock was perceived at Cadiz, where it laſted about five or ſix minutes, with ſuch violence, that the whole town was ſhaken; and in ſuch a manner, that the people could not keep upon their legs; the water in the ciſterns under ground daſhed backwards and forwards with ſuch impetuoſity, as to occaſion a great froth on it. Every body ran out of the houſes and churches in a terrible conſternation, but no damage was done, all the buildings there being exceedingly ſtrong. About an hour afterwards the ſea, which was calm, as there was not a breath of air, began on a ſudden to ſwell up. At the diſtance of eight miles from the city, a wave, at leaſt ſixty feet higher than common, was ſeen approaching all round the city. The inhabitants apprehended every moment to be all drowned, and ran into the ſtreet ſeeking for confeſſion and mercy. In the mean time, the Sea, with the utmoſt violence, daſhed againſt the weſt part of the town, which is very rocky, and which in a great meaſure abated the force of the wave: however, it beat upon the walls with ſuch fury, as to beat in the breaſt-work; it carried away eighty yards of the walls in length, broke into the town, over-

overflowed the ſtreets, and carried away the ſand and walls, but left the houſes ſtanding, ſo that only two or three perſons were drowned. After this every one thought the town would be ſwallowed up: for although this wave was run off, yet the citizens could ſee more waves coming on. They then had not the leaſt hopes of life; the people ran to the higher grounds, the friars of all the convents in the ſtreets giving benediction to the people, all in tears, expecting inſtant death; a great many ran out at the land-gate, to eſcape to the iſland, but alas! poor wretches, the two ſeas met with equal violence, as in the city, and when they would gladly have turned back, found it too late, for they were all drowned, men, women and children. This moſt terrible ſcene laſted near two hours; when the ſea began to ebb, but was ſtill in a boiling motion. Every thing was waſhed off the Mole; the bay was full of overturned boats, floating barrels, and timber, but no damage done to the ſhipping.

About half an hour after nine, * the ſhock began at Liſbon, and laſted with the utmoſt violence,

* The reaſon why this ſhock was felt at Liſbon at half an hour after nine, and not at Madrid till after ten, nor at Seville and Cadiz till before ten, is not ſo much owing to theſe cities lying ſouth of Liſbon; for on the contrary, Madrid is 1° 45′ north of Liſbon. The reaſon therefore muſt be, the difference of longitude between theſe cities

violence, near eight minutes, whereby almoſt all the public edifices, and moſt of the other houſes of that ſuperb capital were thrown down, and upwards of fifty thouſand people buried in the ruins; for unhappily that day being a great feſtival in the Romiſh church, and the earthquake juſt happening at the time of celebrating their firſt maſs, thouſands were aſſembled in the churches, the major part of whom were killed: becauſe theſe great buildings, particularly thoſe built on any eminence, ſuffered firſt; very few of the churches or convents having eſcaped. During this ſhock, which was attended with ſuch a horrid noiſe, that moſt people apprehended the diſſolution of the world, the earth trembled to that degree, that people could ſcarce keep upon their legs. This ſhock, in about fifteen minutes afterwards, was followed by another, no leſs violent, during which, the earth opened in ſeveral places, and having ſwallowed up whole ſtreets, threw up dreadful quantities of fire, water, and ſmoke. At the ſame time, the water in the river roſe up ſeveral yards perpendicularly, whereby thoſe that eſcaped the general deſtruction, were alarmed with a cry that the ſea was coming in, upon which all

cities and Liſbon; for Madrid being 5° 10′ eaſt from Liſbon, will have the ſun in its meridian by more than twenty minutes ſooner than Liſbon; and in the ſame proportion, the cities of Seville and Cadiz, as being ſituated to the eaſt of Liſbon, will have the ſun ſooner.

climb-

climbing over the ruins of churches, houſes, &c. and ſtepping over thouſands of dead and dying people, crowded forward to the hills: ſeveral veſſels were ſwallowed in the Tagus, by the agitation of the waters, or ſunk by the fall of the royal palace and other buildings, ſituated on the banks of that river.

About half an hour after this ſecond ſhock, there was another, which laſted for ſome minutes; and a fourth about twelve o'clock, at which time, or ſoon after, as if all the elements had combined to the ruin of this metropolis, two fires broke out in different parts of the city, which almoſt compleated the deſtruction thereof, becauſe that from the terror all perſons were in, and the wind being high, no attempt was made to ſtop it; ſo that by the great flakes of fire drove by the winds, it was communicated to one ſtreet by another, and raged with great violence for eight days, and that in the moſt thronged parts of the city.

Before this conflagration, the horror of the ſcene within the city was beyond all deſcription; for during the firſt ſhock, the whole city, by the clouds of duſt occaſioned by the falling houſes, was darker than the darkeſt night; it had no ſooner cleared up, than the ſcene of the ſudden deſolation and deſtruction occaſioned by this ſhock, more plainly appeared. Numbers were ſeen expiring, others a ſhocking ſpectacle, while the clergy ran about to abſolve ſuch as were ſtill alive. No-

thing was heard but howling, crying, ſhouting for mercy, and the groans of the dying people. A large quay, piled up with goods, near the cuſtom-houſe, ſunk by the firſt ſhock, with about ſix hundred perſons upon it, who all periſhed. The king, queen, and all the royal family, eſcaped from the palace, juſt before it fell to the ground. The Spaniſh ambaſſador, and nine of his domeſtics, periſhed under the ruins of his houſe. A remarkable providence ſeems to have diſtinguiſhed the proteſtants, for among the great numbers ſettled in Liſbon, only about forty or fifty perſons periſhed. The reaſon of this remarkable delivery, was in a great meaſure owing to the numbers of them that went out of town, before the earthquake began; for the firſt of November, being the feſtival of All-Saints, was appointed for the celebration of the *auto de fe*; upon which occaſion inſults are frequently offered to proteſtants in the city. This dreadful ſolemnity, as it determined great numbers of proteſtants to leave the city that day, ſo it brought numbers of the country inhabitants to Liſbon, to ſee the cruel ſhow; which was the occaſion that many more of the Portugueſe were loſt, than perhaps otherwiſe would have been.

In this melancholy cataſtrophe, ſcarce a ſingle building in the city of Liſbon eſcaped, except the mint. All the people that ſurvived the general deſtruction, fled into the fields, great numbers of whom were half naked. The

The loſs ſuſtained in goods upon this awful event, was immenſe: for the fire conſumed all ſorts of merchandize, houſehold goods, and wearing apparel, ſo that ſcarcely any thing was left, but what cloaths the inhabitants happened to have on, in which ſituation they were reduced to the neceſſity of living for more than two months in tents, or in the open air in the fields, or on board the ſhips in the harbour, and that labouring under a variety of diſeaſes, the common effects of all terrible earthquakes attended with eruptions.

Several ſucceſſive ſhocks were felt at Liſbon, at different times, for many months after the earthquake of the firſt of November, 1755, when there were ſeveral eruptions in and about that city, eſpecially at Cintra, near the rock, much flame and ſulphur were ſeen to iſſue forth. There is no city or place of note in the kingdoms of Portugal and Algarve, but ſhared more or leſs in this calamity: the cities of Coimbra and Braga had ſuffered ſeverely, and St. Ubes was almoſt totally ſwallowed up; the principal mountains of Portugal were ſhaken by this earthquake; ſome of them were ſplit and rent, and huge maſſes of them rolled down into the adjacent vallies, to the great terror and damage of the inhabitants.

Theſe ſhocks, which had done ſuch horrid devaſtations in Portugal, were felt all over Spain, except in Catalonia and the kingdom of Arragon and Valencia. Tariffa and Gibral-

tar were both ſhaken: at Faro, upwards of three thouſand of the inhabitants were buried in the ruins of their houſes, and great part of the city of Malaga was deſtroyed, as were thoſe of Port St. Mary, St. Lucar, and many others. In ſhort, a large volume would ſcarce contain the particulars of the devaſtation occaſioned by this earthquake, during which, the Minho, the Douro, the Tagus, the Guadiana, and ſeveral other rivers, having roſe to an extraordinary height, and overflowed their banks, did a vaſt deal of damage to the ſeveral countries they run through.

From the ſouth coaſts of Spain and Portugal, the earthquake, in the ſame direction, paſſed under the ſea over to Africa, and deſtroyed great part of the city and port of Algiers, and other cities upon the coaſt of Barbary; thence it paſſed to Morocco, where, on the 19th of the ſame month, the city of Mequinez was utterly deſtroyed by an earthquake, with the greateſt part of the inhabitants, as was alſo one half of the city of Fez, and an army of 12,000 Arabs, which were encamped near Mequinez, were ſwallowed up by the earthquake, and one half of the iſland of Madeira was deſtroyed.

Of all the phænomena that attended the earthquake, which proved ſo fatal to Liſbon, nothing was more amazing than the extraordinary agitation of the waters. Ships at ſea were ſhaken, as if they had been daſhed againſt

gainſt the rocks, and that at more than ſixty leagues from the coaſt of Portugal, or any other land. The waters were ſo agitated at Kinſale, in Ireland, that a ſloop of ſixty tons, which lay at anchor, was torn away from her moorings, and two new cables broke like two threads, merely by the force of the current, for there was not a breath of wind, and drove aſhore in a moment. The fiſhing-boats were whirled about like ſo many corks, and as quick as the fly of a jack. The ſea went back, and ſuddenly returned, with a violence too impetuous to deſcribe; and theſe ſurpriſing fluxes and refluxes continued from three o'clock in the afternoon, till ten at night: the waters did not riſe gradually, but with a hollow and horrid noiſe, ruſhed in a deluge, and roſe ſix or ſeven feet in a minute, and ſuddenly ſubſided; the water was as thick as puddle, looked very black, and ſtunk unſupportably.

In ſeveral places in Great Britain, not only the ſea, but rivers, lakes, and ponds were thrown into the like violent commotion. The water in their canals about Amſterdam, and in ſeveral other places in Holland, was in like manner violently agitated; as it was in a great number of places in Germany, Denmark, and Sweden; and to the weſtward, as far as Barbadoes, from five in the afternoon till ten at night, the like ſudden fluxes and refluxes of the ſea took place on the firſt of November, 1755.

Many cities of Spain, being ſituated in deep vallies, which have no current to carry off the waters that come pouring down the adjacent hills, eſpecially after a violent rain, are very ſubject to dangerous inundations, which come down ſo ſuddenly, and with ſuch impetuoſity, that the inhabitants frequently have ſcarce time to ſave themſelves, eſpecially when ſuch inundations happen in the night; for which reaſon there are watchmen appointed in all thoſe places, who, on the firſt approach of every danger of that kind, give timely notice, by ringing, or tolling a great bell; upon the hearing of which, all perſons provide for their ſecurity. Of this kind was an inundation, which, in 1508, laid the greateſt part of the city of Cividad Real, in New Caſtile, under water, by the torrents which ran down from the neighbouring hills, and the overflowing of the river Guadiana; ſo that many of the inhabitants loſt their lives, a great number of the houſes were deſtroyed, and a vaſt deal of other damage done to the city.

The city of Murcia, the metropolis of the kingdom of the ſame name, has been frequently overflowed by the river Segura, which runs by it, and which, by the vaſt quantities of ſnow, that in the winter melt down from the adjacent mountains, as well as from violent or long continued rains that fall into it, ſwells over its banks, and does much damage. In the year 1651, it roſe to ſuch a height, that it threw down 1065 houſes,

houſes, and four monaſteries, and deſtroyed a vaſt number of people, beſides cattle; the water flowing as high as the top of the great altar of the cathedral.

The city of Seville has been frequently overflowed, by the great and rapid river Guadalquivir, which has, at different times, done inconceivable damage to this place; particularly in the year 1626, when, beſides, other dreadful havock, near four thouſand perſons were drowned in it; and in 1708, there happened ſuch a dreadful inundation of the ſame river in this city, as overturned ſeveral hundred houſes, beſides doing an inconceivable deal of other miſchief.

The ſame city has alſo ſuffered often from great and dreadful ſtorms, ſome of which are related to have blown with incredible violence; particularly a ſtorm which happened in 1463, and is ſaid to have carried away a yoke of oxen at plough, in the neighbourhood of Seville; where it carried off one of the bells of a church, dedicated to St. Auguſtine, the length of a bow ſhot from the ſteeple: but the moſt awful calamity that ever viſited this city, was a plague, which broke out in the year 1649, when it raged ſo furiouſly, that 280,000 of the inhabitants died of it.

SECT.

SECT. IV.

An Account of the moſt celebrated Inventions, Diſcoveries, &c. of the Inhabitants of Spain *and* Portugal.

THOUGH the Spaniards and Portugueſe are generally men of a piercing wit, and elevated genius, they are very little improved by ſtudy, and conſequently the world are little indebted to them for any important diſcoveries or inventions in the liberal arts or ſciences. This may be, in a great meaſure, owing to their want of ſchools and academies, where the ſciences are taught in the modern way; for thoſe who do ſtudy, apply themſelves chiefly to the antient philoſophy; and are ſuch ſlaves to the opinions of the antients, that they will admit of no other ſyſtems; and in regard to learning, the Spaniards and Portugueſe evidently labour under two other material diſadvantages, which are the want of a liberty of the preſs, and the being ſubjected to the cenſure of the inquiſition. We owe, however, the Complutenſian bible to Cardinal Ximenes, Archbiſhop of Toledo. This was the firſt Polyglot ever printed, and was publiſhed in 1520, in ſix volumes, including the Lexicon.

Lexicon. It was printed in four languages, the Hebrew, Chaldee, Greek, and Latin, and ſerved as a model to that of Mr Walton, which is more uſeful and exact, and to that of M. Le Jay, printed at Paris, with more expenſive ornaments.

SECT.

SECT. V.

Particular Deſcriptions of the moſt remarkable Public Buildings, in Spain *and* Portugal.

CHURCHES.

AMONG the cathedral churches of Spain, that of Toledo ſeems to claim the firſt notice, being certainly one of the nobleſt and richeſt in the world. It is pretended to have been originally built by James the Apoſtle, but the preſent ſtructure was erected in 1227, by King Ferdinand the Third: it is built of a beautiful white ſtone, curiouſly carved, and in the fineſt ſtile: it is 384 feet in length, 191 in breadth, and 107 in heighth. Its lofty roof is ſupported by eighty-eight ſtately columns, which divide it into three ſpacious iſles, of which the middle one is extremely grand and majeſtic. Eight large and beautiful gates of ſolid braſs, with magnificent porticos, lead into this noble fabric, over which is a ſtately tower, with a ring of bells, of a prodigious ſize, and an extenſive proſpect over the neighbouring country. The choir of the high altar is adorned with the fineſt carved work that can poſſibly be imagined, and incloſed with coſtly iron-gates, fixed on baſes of Jaſper-ſtone. On each ſide of the altar

is

is a braſs pulpit, ſupported by pillars of the ſame metal. The choir of the canons is inclоſed in the ſame manner, and enriched with the moſt curious carvings in wood and Jaſper. Both theſe choirs are adorned on the outſide with fine ſtatues in niches, and other ornamental imagery, repreſenting ſeveral pieces of ſcripture-hiſtory. As to the chapels in this cathedral, of which there are a great number, it is impoſſible to deſcribe their beauty and riches, or the fine monuments of the kings, archbiſhops, and other illuſtrious perſons, whoſe remains are there depoſited. The principal of theſe chapels, called the Sagrario, wherein the treaſure of the church is kept, is all lined with jaſper, from the pavement to the roof; and the altar, which ſtands in a large niche, is encompaſſed with a balluſtrade of ſilver. The image of the Virgin, as big as the life, is alſo of ſilver; and round the altar hang a great many lamps of the ſame metal. Forty or fifty large cloſets are contrived in the wall, which are filled with a prodigious quantity of gold and ſilver veſſels, and other utenſils, ſuch as baſons, chalices, croſſes, croſiers, mitres, &c. The tabernacle, under which the hoſt is carried in proceſſion on particular feſtivals, is all of ſilver gilt, and of moſt exquiſite workmanſhip. It may be taken into ſeven thouſand pieces, and is ſo heavy that it requires thirty men to carry it. Within this, there is a veſſel, of pure gold, ſome of the firſt that was brought from

from America, which contains the conſecrated bread. Here is alſo a figure of the Virgin ſitting upon a rock formed of precious ſtones, amongſt which is a diamond as big as a pigeon's egg. In ſhort, it would require a volume to give a particular deſcription of this cathedral, and all the curioſities of its treaſury.

The cathedral of Compoſtella, dedicated to St. Jago, or St. James the Apoſtle, whom the Spaniards affirm to be buried in that city, is a ſtrong and magnificent fabric, having a very lofty cupola, adorned with four ſtately towers. The tabernacle, or repoſitory over the altar, is perhaps the fineſt in the world, being ſupported by ſix angels mounted on as many columns; and the effigy of the great apoſtle is held up by four Kings of Spain. The whole is of ſilver gilt, of the moſt curious workmanſhip, and enriched with all proper ornaments. Here are ſix large ſilver candleſtics, five feet high, preſented by Philip the Third; and about thirty ſilver lamps are kept continually burning in this church, beſides forty or fifty wax tapers round the altar. As vaſt numbers of pilgrims reſort hither out of devotion, there is a noble hoſpital built near the cathedral for the reception of the poor and ſick, where they are treated with great care and humanity.

Some are of opinion, that the cathedral of Seville, in which there is a mixture of the Gothic

Gothic and Mooriſh taſte, has ſomething in it that looks majeſtic beyond any other in the kingdom. It is certainly a very ſtately edifice, being 407 feet in length, 270 in breadth, and 128 in heighth; and its roof is ſupported by two double rows of beautiful columns. The tower of this church is three hundred and fifty feet high, all built of brick, with large windows to give light to the ſtaircaſe, the aſcent of which is ſo eaſy, that one may ride it up on horſeback, or even in a chaiſe. It is terminated by a cupola, on the top of which is the figure of a woman in braſs, that turns to point out the wind like a weather-cock. The inſide of the church is adorned with ſtatues, paintings, monuments, and other decorations, which would be endleſs to deſcribe; there is a magnificent tabernacle on the high altar, which is of maſſy ſilver, weighing above ſix hundred pounds, the very workmanſhip whereof is ſaid to have coſt forty thouſand ducats.

The cathedral of Leon is deſervedly admired for the beauty and regularity of its architecture, and the elegance and variety of its ornaments, in which reſpect it is reckoned the fineſt in Spain. This appears from the Spaniſh proverb relating to the three cathedrals before mentioned, and this of Leon, which runs thus; 'Seville for grandeur, Toledo for riches, 'Compoſtella for ſtrength, and Leon for curious workmanſhip.' It is likewiſe remark-

able for the monuments of an emperor, thirty-ſeven kings, and other illuſtrious perſonages there interred.

But of all the cathedrals in Spain, the moſt magnificent is that of Cordoua, which is ſtill called the Mezquila, having been originally a moſque, built in the eighth century by the famous Mooriſh King, Abderhaman, and may be juſtly ranked among the wonders of the world. It is 600 feet in length, and 250 in breadth; and the roof, which is exceedingly bold and lofty, and richly gilt, is ſupported by 365 columns of fine marble. It has twenty-four gates, adorned with ſculpture; and ſome of its chapels, of which there are upwards of three hundred, are particularly beautiful, being embelliſhed with gilding, paintings, and other ornaments.

The cathedral of Burgos, in Old Caſtile, is one of the moſt magnificent and richeſt churches in Spain. It was built by Ferdinand the Third, in 1122, and is 260 feet long, 206 feet broad, and of a proportionable heighth. It has five choirs, or large choral chapels, each with a large organ.

The cathedral church of Liſbon, as it ſtood before the earthquake, of the firſt of November, 1755, was a vaſt edifice, but heavy, clumſy, and in the Gothic taſte: yet, as it ſtands upon a hill, at a proper diſtance

it affords a moſt noble proſpect: however, what it wants in elegance and beauty on the outſide, is amply made up by the richneſs of its ornaments within; ſuch as ſtatues, paintings, utenſils of gold and ſilver, of the fineſt workmanſhip, and enriched with the moſt coſtly gems.

ROYAL PALACES.

THE royal palace of the Eſcurial, ſo called from a village of the ſame name in the neighbourhood of which it ſtands, at the diſtance of twenty-two miles from Madrid, is not only the moſt magnificent palace in Spain, but perhaps in Europe; and is reckoned by the Spaniards, one of the wonders of the world. This palace, including a monaſtery, church, college, library, and other buildings, was erected by King Philip the Second, in memory of a victory obtained by his forces over the French, near St. Quintin, in Picardy, in the year 1557 *, on St. Laurence's day, to the honour of which ſaint, the king made a vow of building this ſuperb edifice, in caſe his troops came off victorious.

The whole pile is a vaſt ſquare, about 3000 feet in compaſs, and conſiſts of a fine grey ſtone, dug out of a neighbouring mountain, and ſo well poliſhed, that it looks like marble. The windows in the front, including thoſe of a pavilion at each corner, amount to upwards of eleven hundred; but thoſe within are computed at as many thouſands; the principal front, which faces the weſt, has three noble gates, particularly that in the middle, which leads to the church. This is a large

* See Vol. IV. p. 145.

and

The Escurial.

ial 2.

BIBLIOTHECA · BODLEIANA

and beautiful ſtructure, built in imitation of St. Peter's church, at Rome. It is 364 feet long, 230 feet broad, and of a proportionable heighth; the roof, which is finely gilt and painted, is ſupported by columns of the Doric order, dividing it into ſix ſtately iſles, with forty-eight chapels and altars, beſides the grand one at the eaſt end, which is magnificent beyond deſcription. The tabernacle of the great altar is of porphyry, wrought with the point of a diamond; it is made in the form of a cupola, ſupported by eighteen columns of agate, and adorned with gold and precious ſtones. The altar itſelf is of fine black marble, and behind it, the wall is lined with a ſquare piece of porphyry, wherein the inſide of the church may be ſeen as plain as in a looking-glaſs. It is aſtoniſhing to view the ſacriſty or veſtry, filled with the veſtments, chalices, and other coſtly veſſels and utenſils belonging to the church. Here are a great number of ſtatues of ſaints, &c. of excellent workmanſhip, and ſeveral of the ſmaller ſort are of gold and ſilver. The paintings, which are reckoned above ſixteen hundred, are many of them large, and done by the moſt eminent maſters. Underneath the grand chapel is a large and beautiful mauſoleum, or burying-place for the royal family, which is called the pantheon, being a rotunda, built after the manner of the pantheon at Rome. The deſcent to it conſiſts of more than fifty marble ſteps, and the gate that opens into it is of braſs gilt, and of very curious workman-

ſhip. The dome is lined with jaſper intermixed with little plates of braſs, and the pavement is likewiſe compoſed of ſquares of jaſper and marble, forming a ſtar in the middle. Facing the enterance is a kind of chapel or oratory, adorned in the moſt ſumptuous manner imaginable, particularly with a crucifix, enriched with diamonds, and other precious ſtones. In the middle of this noble vault is a large brazen candleſtic, ſupported by figures of angels, and the four evangeliſts, of the ſame metal; and in twenty-ſix niches, which are embelliſhed with the richeſt ornaments, are placed as many urns or ſepulchres of black marble, thirteen or fourteen whereof are already filled with the deceaſed Kings and Queens of Spain, and the reſt wait to receive the remains of ſucceeding monarchs. As to the royal apartments, or what may be properly called the Palace, a particular deſcription of them would fill a large volume, ſuch as ſome of thoſe volumes are, which profeſſedly treat of this palace: it will be therefore neceſſary to obſerve in general, that theſe apartments are large, ſtately, furniſhed in the moſt magnificent manner, and adorned with every thing that is rich and beautiful. Throughout the whole, there is a vaſt variety of marble, jaſper, and other curious ſtones, carved by the beſt maſters, and in the grandeſt taſte; and all the halls, galleries, ſtair-caſes, &c. are filled with excellent paintings; to ſay nothing of the fine hangings, plate, and other coſtly furniture.

The

The monaſtery, in which there are two hundred religious monks, of the order of St. Jerom, conſiſts of five courts or ſquares, each of which is adorned with a marble fountain. The grand cloiſter, which is two hundred and ten feet ſquare, is paved with black and white marble, as are likewiſe the walks of the garden within it; and at the bottom of it is a beautiful chapel in form of a dome, open on all ſides, and ſupported by marble columns. The refectory, or hall, where the religious take their meals, is very long, and adorned with fine paintings, amongſt which, there is one repreſenting Charles the Fifth, and Philip the Second, carried to heaven by angels. There are ſeveral infirmaries for the ſick belonging to this monaſtery, two grand apartments to entertain ſtrangers, nine kitchens, above forty rooms under ground for offices of divers kinds, and eleven vaſt ciſterns, that will hold two hundred tons of water.

The college, where a number of young ſtudents are maintained at the king's expence, is a very handſome building; and the library is in all reſpects anſwerable to the reſt of this noble and ſurprizing edifice. It contains a fine collection of books in all languages and faculties, both printed and manuſcript, diſpoſed in a very elegant manner; the ſtands or ſhelves being neatly carved, and made of the choiceſt ſort of wood in Spain or the Indies. The floor is beautifully paved with marble, and the cieling is adorned with admirable paint-

paintings, repreſenting the liberal arts and ſciences. The books, which are about 100,000, are placed in five galleries, one above another, all finely painted by Titian, and other celebrated maſters.

But to give the reader ſome general idea of the ſurpriſing grandeur of this palace, it muſt be obſerved, that, according to F. Franciſco de los Santos, who wrote a deſcription of the Eſcurial in a large folio volume, it would take up more than four days to go through all its rooms and apartments; the length of the way being reckoned thirty-three Spaniſh leagues which is above 120 Engliſh miles; and beſides the many thouſand windows in this vaſt pile, Alvares de Colmenar, in his *Delices de l'Eſpagne*, affirms, that there are fourteen thouſand doors belonging to it.

The royal palace of Aranjuez, about thirty miles ſouth of Madrid, though greatly inferior to the Eſcurial in extent and beauty of ſtructure, yet far exceeds it for delightful gardens and water-works, which are here in the higheſt perfection. It is ſituated in an iſland formed by the conflux of the Tagus and the Xarama, and a large canal cut from one river to another. A handſome terrace runs round the gardens, which are ſo well ſupplied with water from the Tagus, that they are never ſcorched by the ſun's heat, but preſerved in a conſtant ſtate of bloom and verdure. In ſhort, the great number of fine fountains, grottos, caſ-

caſcades, ſhady walks, ſummer-houſes, and other ornaments of this palace, render it the moſt agreeable in the kingdom, though the Eſcurial is more frequented by the royal family.

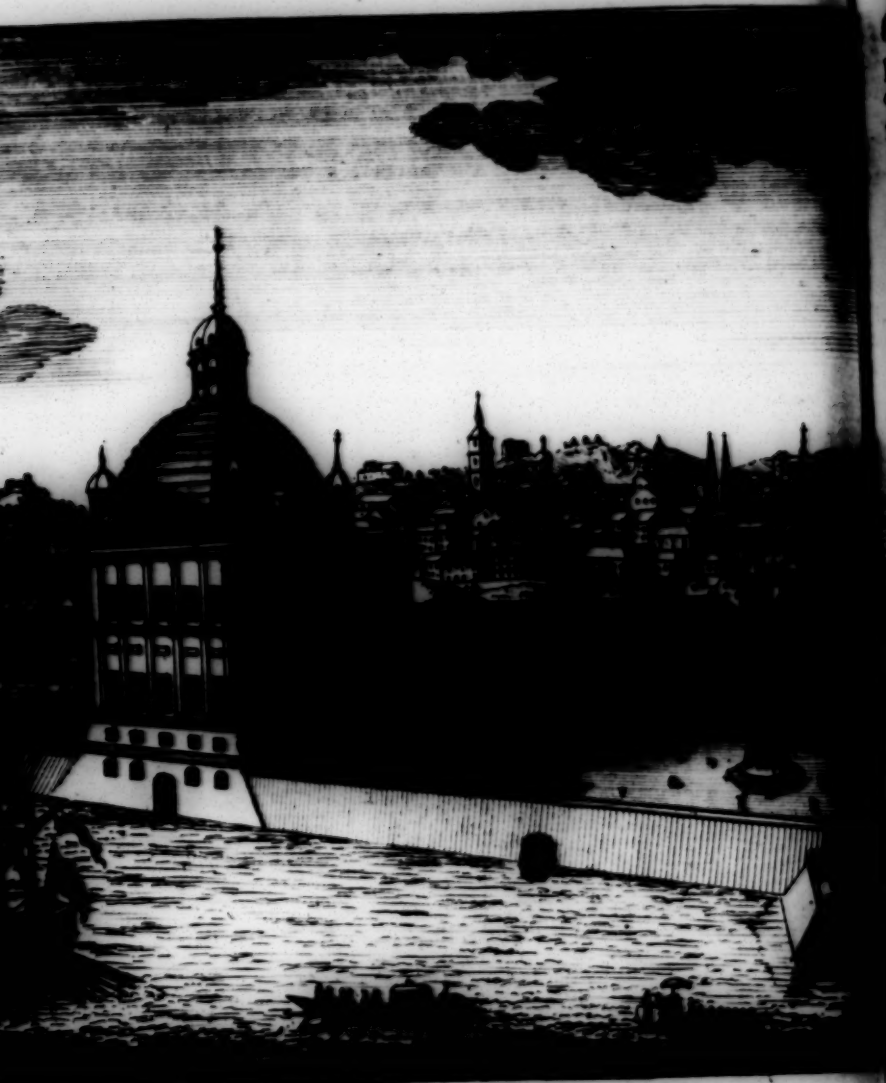
At Madrid, there are two royal palaces: one ſtands on the weſt ſide of the city, and is a ſpacious and magnificent edifice, conſiſting of ſeveral courts, with piazzas round them, and a great many gilt balconies, which have a fine effect. The royal apartments are richly furniſhed, and adorned with fine tapeſtries, paintings, buſts and ſtatues. The other palace is diſtinguiſhed by the name of Caſo del Campo, and thither the King frequently retires in the heat of the ſummer, to refreſh himſelf in the cool ſhady walks, which are the principal convenience of this ſeat.

Upon the decliyity of a hill, near Madrid, is a beautiful and magnificent palace, called, *El Buen Retiro*, or the Good Retreat, from its having been deſigned as a place of retirement for the king, from the hurry of the court and town. It conſiſts of a ſpacious ſquare, built of brick, and flanked with pavilions at each corner, having a parterre, and a beautiful fountain in the middle of it. The apartments are large and ſtately, furniſhed in the moſt elegant and ſumptuous manner, and adorned with exquiſite paintings. The gardens abound with the moſt delightful ſhady walks, canals, water-works, and ſtatues: and all the plea-

pleaſing variety that art and nature can produce, to form a pleaſant retirement. Between the palace of *El Buen Retiro*, and the town of Madrid, and adjoining to both places, is a delightful plain, ſhaded with rows of poplar trees, and adorned with twenty-three fountains, called the Prado, whither the nobility and gentry repair every evening in their coaches, or on horſeback.

At Valladolid, is a royal palace, which, though antient, is a grand and majeſtic ſtructure; and at Toledo is another magnificent old palace, built by King Alonzo the Sixth: but one of the greateſt curioſities of this kind in Spain, is an antient palace or caſtle, at Granada, built by the Mooriſh Kings. This extenſive and magnificent ſtructure, which is kept in good repair, ſtands upon a hill, and has the appearance of a citadel, being ſurrounded with a ſtrong wall, fortified with towers and baſtions, and large enough to receive a garriſon of forty thouſand men. It conſiſts of ſeveral courts, the firſt of which is a noble and extenſive building, paved with marble, and adorned with a fountain at each of the four corners, and a fine canal of ſpring water in the middle, from whence the water is conveyed by pipes into the halls and chambers of the palace: the whole building is of free ſtone, but the inſide of the walls is lined with marble, jaſper, and porphyry: the cielings of the rooms are many of them gilt, and in ſeveral parts of the palace are found hieroglyphical figures

A View of the Palace



e Palace of the King of Portugal at LISBON.

figures and inſcriptions. The moſt beautiful part of this royal edifice is a ſpacious ſquare, called *El Quadro de los Leones*, which has a fine ſtone gallery running round it, ſupported by a hundred and ſeventeen columns of white marble. In the middle of the ſquare is a noble fountain, where a large marble baſon is ſupported by the figures of twelve lions, which ſpout water out of their mouths inceſſantly. Adjoining to this palace, on the declivity of the hill, are a delightful park and gardens; and the whole place is a fine monument of the grandeur of the Mooriſh princes.

The King of Portugal had a palace at Liſbon, which was a ſtately fabric, beautifully ſituated on the banks of the Tagus, and richly furniſhed: but being ſwallowed up by the earthquake in 1755, the court reſides conſtantly at Villa Vitioſa, about eighty-three miles ſouth-eaſt of Liſbon, in which is a fine palace, with a beautiful park ten miles round.

REMARKABLE BRIDGES, and other BUILDINGS.

PADRONO, a ſea-port town of Galicia, ſituated between the rivers Sar and Ulla, has a ſtately bridge over each of theſe rivers, the one built by Pompey the Great, and the other by Julius Cæſar.

Alcantara, in the province of Eſtramadura, has a magnificent bridge over the river Tajo, built by the Roman Emperor Trajan: it conſiſts of no more than ſix arches, though it is upwards of 600 feet in length; its heighth is ſaid to be 200 feet above the water.

At Badajoz, in the province of Eſtramadura, is a ſtately bridge over the river Guadiana, conſiſting of thirty arches, and above 1500 feet in length; and at Merida, in the ſame province, is another magnificent bridge over the ſame river.

Cordoua, in Andaluſia, has a noble bridge of ſeventeen arches, over the Guadalquivir, which is adorned with ſeveral ſtately towers, and was built by one of the Mooriſh Princes.

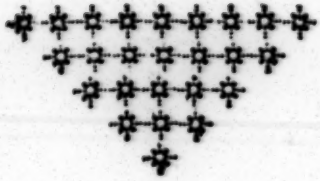
At Madrid, is a magnificent bridge over the Manzanarez, built by Philip the Second, called the bridge of Segovia: Valladolid has a ſtately bridge over the river Piſuerga; and at

Saragoſſa, there are two noble bridges over the Ebro, the one of ſtone, the other of wood, and the wooden bridge is reckoned the fineſt of the kind in Europe.

At Coimbra in Portugal, is a fine bridge, over the river Mondego, conſiſting of a double range of arches, one above another; and it is reckoned, that in the little province of Entre Duero e Minho, in this kingdom, there are no leſs than two hundred ſtately bridges of ſquare ſtone.

In the town of Madrid, is a ſquare, called Plaza Mayor, or the Grand Square, which is four hundred and thirty-ſix feet long, and three hundred and thirty-four feet broad, all arched, after the manner of Covent-Garden, in London, with open walks underneath, which afford ſhelter from ſun and rain. On the arches, or pillars, are reared a hundred and thirty-ſix ſtately houſes, all uniform, with continued rows of balconies joining one to another, and all exactly alike; no houſe being permitted to vary in the leaſt from the general form of the building, either in windows, balconies, or any other ornaments, that may interrupt the uniformity of the whole pile. In this ſquare, are celebrated the bull-baitings, and other public ſhews of Madrid, it being ſpacious enough to contain 50,000 ſpectators, with great eaſe.

At Valladolid, is a great ſquare, with a piazza, the exact model of that at Madrid, conſiſting of five hundred arches, three thouſand windows, all in full view, and three hundred and thirty ſtately gates, or doors, leading into thoſe buildings.



SECT.

SECT. VI.

Curious Remains of Antiquity in Spain *and* Portugal. *Remarkable Laws, Cuſtoms, and Traditions of the Inhabitants; with a Summary View of the moſt extraordinary Revolutions among them.*

REMAINS *of* ANTIQUITY.

AS the Romans were a long time maſters of Spain, a great many monuments of them might naturally be expected in that country; and indeed there are ſeveral remains of Roman buildings ſtill to be met with in many parts of the kingdom; though perhaps it is owing to the devaſtations of the Moors, that not a greater variety of Roman ſtructures is to be found throughout Spain and Portugal.

There is no monument of Roman magnificence in Spain more remarkable, or preſerved more entire, than an aqueduct at Segovia, built by the Emperor Trajan. It is of a ſurpriſing magnitude, conſiſting of two rows of arches, one over the other, which convey water in great abundance through the whole city, ſo as not only to ſupply the houſes, but alſo many fountains, and other water-works, in the gardens of the nobility and gentry of

the place. It is built of very large ſtones, and, though it has ſtood ſo many centuries, is ſtill ſtrong and beautiful, and ſeldom in need of repair.

At Merida, among other remains of Roman antiquity, there is ſtill ſtanding great part of a triumphal arch, now called by the inhabitants of this place, Arca de St. Jago; and at Tarragona, are yet viſible the ruins of ſome antient Roman ſtructures, particularly of an amphitheatre, which has furniſhed materials for the building of a neighbouring church. At Toledo are alſo the ruins of a noble amphitheatre.

It is ſaid, that in the time of the Romans there was a temple in the city of Liſbon, dedicated to Minerva, in which were hung up ſome rudders, ſterns, and other fragments of a ſhip, pretended to have belonged to Ulyſſes, the ſuppoſed founder of the city and the temple: and by ſome antient monuments dug up in the neighbourhood of Cintra, not far from Liſbon, it appears, that on a rock of the ſame name, near the town, there were two temples, one dedicated to the ſun, and the other to the moon.

At Setubal, about twenty miles from Liſbon, is a ſtately Roman aqueduct. The walls of Santarem, about forty miles eaſt of Liſbon, were built by the Romans; and, notwithſtanding their great antiquity, they are at this day reckon-

reckoned very ſtrong. At Evora, in the province of Alentejo, ſeveral monuments with Roman inſcriptions have been dug up; and at Villa Vitioſa, a great number of Roman coins have been found, together with many inſcribed monuments, from which it appears, that here was a temple dedicated to Proſerpine.

REMARKABLE CUSTOMS *and* LAWS.

BULL-FIGHTING is a ſport or exerciſe peculiar to the Spaniards and Portugueſe, and conſiſts chiefly of a kind of combat of a Cavalier or Tauriro, againſt a wild bull, either on foot, or on horſeback, by riding at him with a lance, or other weapon. Of theſe ſports, which are always celebrated on ſome feſtival or rejoicing day, and are therefore ca'led Bull-feaſts, we meet with various accounts; one of which is to the following effect. A bull-feaſt having been appointed at Madrid, on account of the king's marriage, ſeveral cows were driven into the neighbouring foreſts, and being purſued by wild bulls, the females decoyed them into ſtables prepared for them, near the Great Square, called the Plaza Mayor, where the combat was to be; and it is ſaid, that by this means, no leſs than between thirty and forty of theſe wild bulls are frequently at one time brought to Madrid; the ſtreets of which are lined and barricadoed on the ſides, to prevent theſe furious creatures doing miſchief. If any of the bulls endeavours to return, and make his eſcape, he is followed by a body of men, ſome on horſeback, and others on foot, armed with lances, ſpears, and other weapons, who force him back; and where a cavalier is ſo fortunate as to bring back a bull that has broke from

from the reſt, the honour is almoſt equal to that of having killed him in ſingle combat.

The bulls being fed for ſome time, the fierceſt of them were made choice of for the ſport; and on the day appointed, the Plaza Mayor being covered with ſand, was ſurrounded with a ſtrong barricade ſix feet high. The balconies were covered with velvet or tapeſtry; and the King's balcony was diſtinguiſhed by the richneſs of the carving and gilding, and by the canopy over it. Directly oppoſite to the King, were the balconies of the foreign ambaſſadors; and on the right hand of his Majeſty, the balconies of the ſeveral Councils of Caſtile, Arragon, the Inquiſition, &c. diſtinguiſhed by their reſpective arms. Next to theſe were placed the judges, grandees, and city companies, according to their reſpective quality; nor were their ladies or daughters excluded, being all entertained at the charge of the public, with ſweetmeats, fruit, &c. and preſented with ribbons, fans, gloves, and other toys. Underneath the balconies were ſcaffolds, erected for the common people, except under the King's balcony, which place was reſerved for his Majeſty's guards. Foreign miniſters and other perſons of diſtinction, having in their coaches taken ſeveral turns before the King came in, ſaluted the ladies in the balconies, who on this occaſion appear without their veils, and are covered with diamonds and other precious ſtones almoſt from head to foot. The King being come into the ſquare, the coaches

mediately withdrew, and all the company took their places, after which the ſquare was watered, and the guards were drawn up under the King's balcony, without any barricade before them, except what they made with their half pikes and halberts, which they would have preſented againſt the bull, if he approached them.

Things being thus prepared, ſix of the city officers entered the ſquare, mounted on fine horſes, richly accoutred after the Moreſco faſhion; they were dreſſed in white habits, with plumes of feathers in their hats, and each of them with a white wand; and their buſineſs was to introduce the knights, who were to encounter the bulls. The firſt day of the feaſt, theſe officers introduced ſix cavaliers, prepared for the combat, mounted on fine horſes ſet off with the richeſt furniture, and feathers in their hats; each of the cavaliers was followed by twelve led horſes, and as many mules, loaden with lances, about five feet long, finely pointed and gilt; and the mules were covered with velvet embroidered with the arms of their reſpective maſters, who were dreſſed in black, embroidered with gold and ſilver, with diamond hat-bands, and ſcarfs of different colours, with black cloaks tied behind them, ſo as not to hinder the uſe of their arms; they had on their legs little white buſkins, and long gilt ſpurs, with one ſharp point only, after the manner of the Moors; and like them rode in ſhort ſtirrups, which brought their knees as high as the ſaddle; they were attended each by forty footmen, who

who were all in foreign dreſſes, and carried a bundle of lances.

Being conducted by the city officers over the Plaza Mayor, on approaching the King's balcony, they made a profound reverence, and aſked leave to engage the bulls, which being granted with wiſhes for their ſucceſs, all the trumpets ſounded, and the people ſhouted; after this they ſeparated, and, having ſaluted the ladies of their acquaintance, ſent away all their footmen out of the liſts, except two for each cavalier, who carried their maſter's lances, and kept cloſe at their ſides. At the ſame time entered ſeveral robuſt fellows, from different parts of the kingdom, in order to fight the bulls on foot.

The city officers, having received the keys of his Majeſty's ſtables, let out a bull, and made their eſcape as faſt as their horſes could carry them; and the bull no ſooner came into the ſquare, but the young fellows on foot ſhot their arrows, or threw their darts, at him, which ſticking in his fleſh, he raged and ſtamped, threatning deſtruction to every thing in his way; upon which one of the cavaliers approaching him with his lance, the beaſt run at him with all his fury, but was dexterouſly avoided by the knight, who ſlipt on one ſide; and, as the bull paſſed, wounded him with a lance, which being broken, one of the footmen ſupplied his maſter with another, with which he attacked the beaſt again in the like man-

manner: this increaſed the fury of the bull to the laſt degree, and the cavalier ſeemed to be in great danger, upon which the footmen came to his aſſiſtance, and one of them, who was a black, advancing to the beaſt with his dagger only, ſtruck him with that force between his horns, that he fell dead upon the ſpot. Then the city officers came in with four mules and dragged the beaſt out of the rails, under the ſound of trumpets and the acclamations of the people.

It appears, that there were no leſs than twenty bulls let out to fight on this occaſion, one after another; and one of theſe bulls ran with ſuch fury at Count Coningſmark, who was one of the combatants, that he wounded him in the leg, and ript up his horſe's belly; notwithſtanding which, the Count, ſupported by one of his footmen, attacked the bull on foot, with his ſword only, and gave the beaſt a terrible wound in the head, upon which, turning to the lady of his affections, he kiſſed his ſword, and was carried off half dead with the loſs of blood. The ſame day, a Biſcayner leaped from his horſe on the back of the bull he was engaged with, and continued there a quarter of an hour; and in the end broke one of the bulls horns. At this feaſt, a young gentleman of Toledo was toſſed up into the air by a bull, and ſo bruiſed by the fall, that he died on the ſpot; two others were mortally wounded, and four horſes killed; and yet this

is

is nothing to the miſchief that happens ſometimes on the like occaſions.

If a bull defends himſelf ſo long that the ſpectators are tired of him, they bait him with dogs, and hamſtring him, and another bull is let out: the dexterity by which the combatants manage their horſes and arms is incredible, keeping ſometimes a whole hour within a foot of the beaſt, without being touched. It ſeems, that when the bull has inſulted a cavalier by forcing his lance out of his hand, throwing off his hat, wounding his horſe, or any of the company, the knight is bound in honour to give him a wound in return, or die in the attempt; and if the horſe appears daunted at the bull, the cavalier muſt alight and engage on foot; the reſt of the knights alſo are obliged to diſmount and follow him, not to engage themſelves, but to ſee if they can terrify the beaſt, by marching againſt him in a body; and if the creature retires to the further end of the ſquare, they have ſatisfied the law of duelling, as they call it.

We have a deſcription of a bull feaſt exhibited in the Plaza Mayor, at Madrid, upon occaſion of his preſent Catholic Majeſty's public entrance into his capital, on the 15th of July, 1760, which does not in any material circumſtance of formality differ from the preceding account. The cavaliers, who were four in number, came to the ſquare in four coaches, which were of an antique and ſingular make, with glaſſes at the

the ends, and quite open at the ſides; they diſpoſed themſelves for the encounter by the firſt placing himſelf oppoſite the door of the place where the bulls were kept. Another cavalier at ſome diſtance, placed himſelf behind the firſt, and the other two in like manner: the bull appearing, and ſeeing one of the attendants of the firſt cavalier ſpreading his cloak before him, aimed directly at the man, who eaſily evaded him, and gave his maſter an opportunity of breaking his ſpear in the bull's neck. In like manner he received the honourable wounds from the lances of the other cavaliers, and was then encountered by the men on foot, who ſoon put an end to him, by thruſting a ſword into his neck or ſide, which brought him to the ground, and then ſtriking a dagger, or the point of a ſword, behind his horns into the ſpine.

After the knights had ſufficiently tired themſelves with theſe exploits, the King gave them leave to retire; after which bulls were let out from another door, and encountered entirely by the men on foot, who were ſo far from fearing their rage, that their chief buſineſs was to irritate them the more, by throwing little barbed darts at them, ſome of which were filled with gunpowder, and burſt in the manner of a ſquib or ſerpent, as ſoon as they had faſtened upon the bull. So much for the bull feaſts.

The

The ladies in Spain are ſeldom ſuffered to appear in public, either before or after marriage, unleſs it be at church; and then they are veiled: even at a play, they are concealed from the male audience by a lattice, for which reaſon, perhaps, they chuſe to viſit one another at their houſes. The floors of their apartments being covered with rich carpets, and long velvet cuſhions placed round the rooms, the ladies ſit croſs-legged on them, after the manner of the Turks, which being contrary to the cuſtoms of other Europeans, is ſuppoſed to have been introduced here by the Moors.

In this country, lovers often ſerenade their miſtreſſes with vocal and inſtrumental muſic, for a great part of the night, which cuſtom ſeems to be peculiar to the Spaniards. In Biſcay and ſome other parts of Spain, an antient cuſtom prevails of obliging a ſtranger, who comes to ſettle as an houſe-keeper, before the year is elapſed, to give an account of himſelf and his family; and if it appears, that he is of what is called here the old Chriſtian extraction, he is never more moleſted on that account: but if he cannot make ſufficient proof of that, he is obliged to quit the place. The reaſon of this cuſtom is, that the inhabitants of thoſe places have always preſerved themſelves from all intermixture with either Jews or Moors, and therefore will admit of no perſon to ſettle among them, but ſuch as are

of the antient and unmixed Chriſtian extraction.

The inhabitants of Biſcay have ſeveral other whimſical cuſtoms and privileges, one of which is, that they will not ſuffer a foreign biſhop to come into their territories on any account; and it is ſaid, that a biſhop having accompanied Ferdinand, King of Caſtile, into Biſcay, in 1477, the magiſtrates came in a body to repreſent to his Majeſty, that this was an infraction of their antient cuſtoms and privileges; upon which the King diſmiſſed the biſhop: but the inhabitants, to ſhew their reſentment, followed that prelate quite out of their territories, pared the earth wherever he paſſed, gathered it up in a heap, burned it, and threw the aſhes into the ſea.

In Spain and Portugal, as well as in Italy, there is a tribunal called the Inquiſition, or Holy Office, erected by the Pope's authority, for the examination and puniſhment of heretics, or thoſe who entertain opinions contrary to any of the tenets of the Church of Rome. This court was founded in the twelfth century by father Dominic and his followers, who were ſent by Pope Innocent the Third, with orders to excite the Catholic princes and people to extirpate heretics, to ſearch into their number and quality, and to tranſmit a faithful account thereof to Rome. Hence they were called inquiſitors; and this gave birth to the formidable tribunal of the inquiſition, which

was

was received in all Italy, and the dominions of Spain, except the kingdom of Naples, and the Low Countries.

This diabolical tribunal takes cognizance of hereſy, judaiſm, mahometaniſm, ſodomy, and polygamy; and the people ſtand in ſo much fear of it, that parents deliver up their children, huſbands their wives, and maſters their ſervants, to its officers, without daring in the leaſt to murmur. The priſoners are kept for a long time, till they themſelves turn their own accuſers, and declare the cauſe of their impriſonment; for they are neither told their crime, nor confronted with witneſſes. As ſoon as they are impriſoned their friends go into mourning, and ſpeak of them as dead, not daring to ſollicit their pardon, leſt they ſhould be brought in as accomplices. When there is no ſhadow of proof againſt the pretended criminal, he is diſcharged, after ſuffering the moſt cruel tortures, a tedious and dreadful impriſonment, and the loſs of the greateſt part of his effects. The ſentence againſt the priſoners is pronounced publicly, and with extraordinary ſolemnity. In Portugal they erect a theatre capable of holding three thouſand perſons, in which they place a rich altar, and raiſe ſeats on each ſide in the form of an amphitheatre. There the priſoners are placed, and over-againſt them is a high chair, whither they are called, one by one, to hear their doom, from one of the inquiſitors.

Theſe unhappy people know what they are to ſuffer, by the cloaths they wear that day. Thoſe who appear in their own cloaths, are diſcharged upon payment of a fine: thoſe who have a ſanto benito, or ſtrait yellow coat without ſleeves, charged with St. Andrew's croſs, have their lives, but forfeit all their effects: thoſe who have the reſemblance of flames, made of red ſerge, ſewed upon their ſanto benito, without any croſs, are pardoned, but threatened to be burnt if ever they relapſe: but thoſe who, beſides theſe flames, have on their ſanto benito their own picture, ſurrounded with figures of devils, are condemned to expire in the flames. The inquiſitors, who are eccleſiaſtics, do not pronounce the ſentence of death, but form and read an act, in which they ſay, that the criminal being convicted of ſuch a crime, by his own confeſſion, is with much reluctance delivered to the ſecular power to be puniſhed according to his demerits: and this writing they give to the ſeven judges, who attend at the right ſide of the altar, who immediately paſs ſentence. The priſoners, being thus in the hands of the civil magiſtrate, are preſently loaded with chains, and carried firſt to the ſecular goal, and from thence in an hour or two brought before the civil judge, who, after aſking in what religion they intend to die, pronounces ſentence, on ſuch as declare they die in the communion of the church of Rome, that they ſhall be firſt ſtrangled, and then burnt to aſhes; on ſuch as die

die in any other faith, that they be burnt alive.

Both are immediately carried to the place of execution, where there are as many ſtakes ſet up, as there are priſoners to be burnt, with a quantity of dry furz about them. The ſtakes of the profeſſed, that is, ſuch as perſiſt in their hereſy, are about four yards high, having a ſmall board towards the top for the priſoner to be ſeated on. The negative and relapſed being firſt ſtrangled and burnt, the profeſſed mount their ſtakes by a ladder; and the prieſts who attend them, after ſeveral repeated exhortations to be reconciled to the church, part with them, telling them they leave them to the devil, who is ſtanding at their elbows to receive their ſouls, and carry them with him into the flames of hell. On this a great ſhout is raiſed, and the cry is, *Let the dogs beards be ſinged*, which is done by thruſting flaming furzes faſtened to long poles againſt their faces, till they are burnt to a coal, which is accompanied with the loudeſt acclamations of joy. At laſt, fire is ſet to the furz at the bottom of the ſtake, over which the profeſt are chained ſo high, that the top of the flame ſeldom reaches higher than the ſeat they ſit on; ſo that they rather ſeem roaſted than burnt. This is called the *Auto de Fe*, or Act of Faith, and may be ſtiled the laſt act of the inquiſitorial tragedy. It is a kind of goal delivery, appointed as often as a competent number of priſoners in the

Inquiſition are convicted of hereſy, either by their own voluntary or extorted confeſſion, or on the evidence of certain witneſſes; it is the utmoſt exertion of prieſtly tyranny, and a reproach to humanity itſelf.

BIBLIOTHECA BODLEIANA

REVOLU-

REVOLUTIONS *and other* MEMORABLE EVENTS.

SPAIN is a name immediately derived from *Eſpania*, or *Hiſpania*, which is ſuppoſed to have been given to this country firſt by the Phœnicians, from the vaſt number of lapwings found here; *Sepana* in the Phœnician language ſignifying a *lapwing*; and, in confirmation of this opinion, it is obſerved, that upon the Emperor Adrian's medals, the lapwing is the device for Spain: but the moſt antient names of this country upon record are Iberia and Heſperia: the name *Iberia* is ſuppoſed to have been given it from the river *Iberus*, now called the Ebro; and it was called Heſperia by the Greeks, from its weſtern ſituation in regard to them; *Heſperus* ſignifying the *Weſtern* or *Evening Star*.

With regard to the original inhabitants of this country, it is reaſonable to ſuppoſe, that they came from Gaul, or from the coaſt of Barbary. The Phœnicians, or Canaanites, were the next who planted colonies in Spain; and who, being obliged to abandon their own country to the Iſraelites, coaſted along the Mediterranean Sea, and ſettling themſelves firſt at Carthage, on the coaſt of Africa, traded with the inhabitants of this country, built ſeveral towns and fortreſſes in it, and planted colonies on the coaſt, about the time of the building

building of Rome, and 750 years before Chriſt.

The native Spaniards, being exaſperated at the encroachment of the Phœnicians, entered into a general confederacy againſt them, and had well nigh driven them out of their country, when the Phœnicians called in the Carthaginians to their aſſiſtance, about 520 years before the Chriſtian æra, and in a very few years made a conqueſt of all the ſouth of Spain. The inteſtine wars which then raged among the Spaniards rendered them an eaſy prey to ſeveral other warlike and maritime nations; ſome of which came and ſettled in various parts of the kingdom, while others were contented with carrying off their gold and ſilver. The Celtiberians, in Eaſt Spain, in order to ſecure their poſſeſſions, entered into an alliance with the Romans, and commenced a war againſt the Carthaginians both in Spain and Sicily, which obtained the name of the firſt Punic war. This ended in a general peace, wherein it was agreed that the river Iberus ſhould be the boundary between the Carthaginians and Romans.

About 218 years before Chriſt, the Carthaginians, under the celebrated Hannibal, beſieging and deſtroying Saguntum, occaſioned the ſecond Punic war. The Romans, however, ſoon became ſovereigns of Spain, and continued ſo until the year of Chriſt 400; about which time, the Goths, Vandals, and other

other northern nations broke in upon the Roman empire, and made a conquest of Spain. The Gothic government remained in great glory near 300 years, and was then subverted by the Moors. Roderic, at that time King of the Goths, having committed a rape on Florinda, daughter of Count Julian, the governor of Mauritania, that disgusted nobleman, in revenge, entered into a confederacy with the Saracens, or Moors, and invited them to invade Spain, which was accordingly done, with an army of six hundred thousand men, who engaged Roderic, and gained a compleat victory. They immediately subdued all Spain, except the northern provinces; but Pelagius, a noble Spaniard, having recovered Leon from those infidels, took upon him the title of King of Leon. His successors by degrees enlarged that dominion, and erected not only the earldom of Barcelona, but the kingdoms of Arragon and Navarre. The Moors, however, were not entirely conquered until the year 1491, when the city of Granada was taken by Ferdinand and Isabella, who had united all the petty kingdoms of Spain into one, by their marriage, and were succeeded in their united kingdoms by their grandson Charles the Fifth, Archduke of Austria, afterwards Emperor of Germany.

By the articles for the surrender of Granada, Boabdil, King of the Moors, with his subjects, submitted to do homage to Ferdinand and Isabella, on condition they might retain the poſ-

session

ſeſſion of their eſtates, be governed by their own laws, and have the free exerciſe of their religion. But they were compelled, either to turn Chriſtians, or to leave the kingdom; whereupon ſeveral hundred thouſand of them tranſported themſelves to Africa, and the Jews were baniſhed to Portugal.

At this time, America was diſcovered by Columbus, the greateſt part of which was conquered by ſuch barbarous and treacherous means, as muſt fix an eternal odium on the Spaniſh nation, though it made ſuch an immenſe encreaſe to that monarchy. The kingdom of Navarre was their next acquiſition, and ſoon after they obtained the dominion of Naples in Italy. Thus all the petty kingdoms of Spain, that of Portugal excepted, were united in one monarchy. Ferdinand and Iſabella reigned thirty years, and, after the death of Iſabella, in 1504, the kingdom devolved to Philip, ſon of the Emperor Maximilian, who had married Joanna, the daughter of Iſabella, and in her right ſucceeded to the kingdom of Caſtile. But he dying in two years, Ferdinand again took the reins of government, and held them until his death in the year 1516. Upon his deceaſe, Charles, the ſon of Philip, came from Flanders, and as ſoon as he arrived in Spain, was proclaimed King of the united kingdoms. In 1519, on the death of Maximilian, Charles was elected to the imperial throne, and became thereby the greateſt Monarch that ever was in Europe; upon which account

count he was called Charlemagne, or Charles the Great. In his reign, happened a greater rebellion, than has ſince been known in the kingdom of Spain. It was raiſed by the common people, and though by the court denominated a rebellion, might perhaps more juſtly be ſtiled a ſtruggle for the recovery of their loſt privileges. But for want of experienced leaders, as well as through the bravery of Charlemagne, it was eaſily ſuppreſſed; and therefore ſerved only to ſtrengthen and confirm the unlimited power of that Monarch. He was at the ſame time engaged in a war with France, which turned alſo to his advantage by taking King Francis priſoner *. In 1556, after a reign of forty years, he reſigned the empire to his brother Ferdinand, and the dominions of Spain to his ſon Philip; retiring himſelf to the monaſtry of St. Juſt, where he died, two years after.

His ſon, Philip the Second, attempting to govern as arbitrarily in the Netherlands, as he did in Spain, and at the ſame time introducing a kind of inquiſition for the ſuppreſſion of the Proteſtants, who were very numerous, occaſioned a general inſurrection and revolt of the Dutch, who by the aſſiſtance of England and France, formed themſelves into that republican government, in which they have continued ever ſince. In the year 1588, Philip fitted out that famous fleet, called the Invincible Armada, with which he intended to invade England,

* See Vol. V. p. 136.

but

but by the bravery of the Engliſh, and the ſtorms at ſea, it was almoſt totally deſtroyed *. He afterwards entered into a war with France, with as little ſucceſs: but, upon the death of Henry, King of Portugal, in the year 1579, he invaded that kingdom, which he claimed as ſon and heir of Iſabella, daughter of Emanuel, King of Portugal; and though the Braganza family were thought to have a better title, they were, at that time, unable to oppoſe Philip's uſurpation, whereby he became poſſeſſed of the Spice Iſlands, and other Portugueze ſettlements in the Eaſt Indies, as well as of Guinea in Africa, and Brazil in South America. This Monarch married Mary, Queen of England, and after her death, courted her ſiſter, Queen Elizabeth. He was guilty of ſeveral oppreſſions and cruelties to his Spaniſh ſubjects, eſpecially thoſe in the kingdom of Arragon, for preſuming to aſſert their liberties; and after a troubleſome and inglorious reign of forty-two years, he died, leaving his ſon Philip the Third his ſucceſſor, under whoſe reign no remarkable event happened, except the expulſion of nine hundred thouſand Moors, which Philip judged neceſſary, as they actually exceeded the number of Roman Catholics in his dominions, eſpecially in the maritime provinces.

Philip the Fourth, his ſon and ſucceſſor, though involved in war during his whole reign, was ſo much addicted to pleaſure, that his

* See Vol. III. p. 160.

enemies

enemies obtained ſeveral conſiderable advantages over him. The Dutch in particular, who had revolted from his grandfather, gained ſuch ſucceſſes, that at the treaty of Weſtphalia, in 1648, they were acknowledged independent ſtates. In the mean time the Catalans took up arms in defence of their antient liberties, but were at laſt obliged to ſubmit. In the year 1640, Portugal revolted, John the Fourth, Duke of Braganza, having found means to expel the Spaniards, and aſcend that throne. In this revolution he was ſo well ſupported by the French and Engliſh, that Portugal ſoon raiſed itſelf again into an independent monarchy, and has continued ſo ever ſince.

In the year 1647, Naples was almoſt alienated from the Spaniſh dominions, by means of Maſſinello, a fiſherman, who promoted an inſurrection on account of ſome duties that were laid on fiſh and fruit, and reduced the whole country to his obedience; but by the dexterous conduct of the Spaniſh governor, Maſſinello was ſeized and taken off, and the inſurrection ſoon ſubſided. In the year 1650, the Engliſh invaded the iſland of Jamaica, and took it from the Spaniards. Spain being engaged in a war with France alſo, loſt the province of Artois, and ſeveral towns in the Netherlands, which, on the Pyrenean treaty, in 1660, were confirmed to the French, and thereupon Lewis the Fourteenth married the eldeſt Infanta of Spain, Maria Thereſa, but they both renounced all future pretenſions to the ſucceſ-

ſion of the Spaniſh monarchy for them and their heirs.

Lewis, however, not long after made another deſcent upon the Spaniſh Netherlands, and took ſeveral places, which were all confirmed to him by the treaty of Aix-la-Chapelle, in 1668. In 1672, the Spaniards loſt Conde, Cambray, St. Omers, and all Franche Compte.

In 1672, Spain entered into a confederacy with the Emperor and Empire, England, Holland, and the northern crowns, againſt France, but the allies were defeated at Flerus, in Flanders, before the Engliſh army had joined them. During the courſe of the two following years, the French not only took Mons, and Namur, but gained a compleat victory over the confederates, at the battle of Steinkirk. In 1695, Namur was re-taken by King William, who commanded the allies: the French, on the other hand, took Deynſe, and Dixmunde, bombarded Bruſſels, and made fourteen battalions of the allies priſoners. The year 1697 was very ſucceſsful to the French: they not only got poſſeſſion of Aeth, in Flanders, and Barcelona, the capital of Catalonia, in Spain, but plundered Carthagena, in America, of an immenſe treaſure. But towards the cloſe of the year, they conſented to a peace, reſtored Catalonia, and all the places they had taken in Flanders, to the crown of Spain; which peace was concluded at Ryſwick *.

* See Vol. V. p. 204. *& ſeq.*

being

The King of Spain, being, at this time, in a declining ſtate of health, and the Dutch being apprehenſive that Lewis the Fourteenth would ſeize on Flanders, and the whole Spaniſh monarchy, upon the death of his Catholic Majeſty, perſuaded the King of England, William the Third, to enter into a treaty with the French King, for a partition of the Spaniſh dominions, between the Emperor, the Duke of Bavaria, and his Moſt Chriſtian Majeſty; each of whom pretended a right to the ſucceſſion, which, coming to the knowledge of the Spaniſh King, he made his will, and gave the whole monarchy to Philip, Duke of Anjou, ſecond ſon of the Dauphin of France, and grandſon of Lewis the Fourteenth.

On the death of the King of Spain, in 1700, Lewis the Fourteenth immediately ſeized on all the Spaniſh dominions, for his grandſon Philip, and cauſed him to be proclaimed King. This proceeding alarmed both the Emperor, and the maritime powers. The Emperor dreaded this encreaſe of power to the houſe of Bourbon, and the maritime powers were no leſs apprehenſive that Spaniſh America would fall into the hands of the French. The Imperialiſts inſiſted that the King's will had been forged, or executed when he was non-compos: a war enſued: they marched an army over the Alps into Italy, in order to recover the Spaniſh territories there, from the French.

During this war, the allies were very ſucceſsful, both in Italy and Flanders, and the

Emperor Leopold with his ſon Joſeph, having reſigned their intereſt in the Spaniſh monarchy to the Archduke Charles, he was accordingly proclaimed King of Spain, in 1703, and acknowledged as ſuch by the Engliſh, the Dutch, and the Spaniſh ſtates in Italy. He was conducted to Spain by a Britiſh fleet. Twelve thouſand Engliſh and Dutch were afterwards embarked, in order to join the Portugueze, and invade Spain. The confederate fleet, commanded by Sir George Rooke, took Gibraltar on the 11th of July, and on the 13th of Auguſt entirely defeated the Spaniſh fleet near Malaga. The confederate forces, under the command of the Duke of Marlborough and Prince Eugene, were at the ſame time no leſs ſucceſsful in Flanders. They marched to the banks of the Danube, and obtained that memorable victory at Hochſtet, where the French and Bavarians were routed, and the Elector of Bavaria driven out of his dominions, of which the Imperialiſts took poſſeſſion in the year 1704. On the 5th of May died Leopold, Emperor of Germany, and was ſucceeded by his eldeſt ſon Joſeph, King of the Romans.

On July the 23d, 1705. King Charles and the Prince of Heſſe Darmſtadt, with a conſiderable army, embarked on board the confederate fleet at Liſbon, commanded by Sir George Rooke, and having landed at Barcelona, attacked and took the fort of Montjoy, after which the city ſurrendered to King Charles, but the Prince of Heſſe was killed. The whole province of Catalonia, ſoon after, declared for King Charles,

as did the province of Valencia, on the approach of the Earl of Peterborough. In the ſpring following, King Philip laid ſiege to Barcelona, which was ſo well defended by Charles, that Philip was obliged to raiſe the ſiege, and retire precipitately to France. Whereupon the allied army, on the ſide of Portugal, marched immediately to Madrid, where they proclaimed King Charles the Third, and invited that Prince to come and take poſſeſſion of the capital; but the province of Arragon declaring for him at the ſame time, he marched thither, where he ſtaid ſo long, that King Philip returned from France, with a very powerful army, and forced the allies to evacuate Madrid.

The French, in the mean while, having taken every town of the Duke of Savoy, except Turin, laid ſiege to that place; upon which, Prince Eugene gave them battle in their trenches, on the 7th of September, and gained a compleat victory. The allies, under the command of the Duke of Marlborough, gained alſo ſeveral ſignal advantages over the French in the Netherlands. Bruſſels, Mechlin, Ghent, Bruges, and Antwerp, opened their gates, proclaiming King Charles the Third their ſovereign. Before the end of the campaign, the Spaniſh iſlands of Majorca and Ivica were reduced to his obedience, by the Britiſh Admiral, Sir John Leake. In the beginning of 1707, the allied army in Spain, commanded by the Marquis das Minas, and the Earl of

Galway, was totally defeated, at Almanza, in Caſtile, by the French and Spaniards, and all Spain was entirely loſt, except Catalonia.

In 1708, the French ſurprized the cities of Ghent and Bruges; but their army being defeated at Oudenard, and the city of Liſle taken by the allies, Ghent and Bruges were recovered. About the ſame time, Sir John Leake reduced the Spaniſh iſland of Sardinia to the obedience of King Charles. On the 7th of May, 1709, the allies on the ſide of Portugal were defeated at Caya by King Philip's forces. On the other hand, Tournay in Flanders was taken by the allies, and Prince Eugene and the Duke of Marlborough obtained a compleat victory over the French, commanded by the Marſhals Villars and Boufflers, at Malplaquet, and the city of Mons was taken by the allies on the 21ſt of October.

In the campaign of 1710, Douay and Bethune in the Netherlands were taken by the allies; and General Stanhope, commander for King Charles, gained two victories over King Philip in Spain, after which he took poſſeſſion of Madrid; but the Portugueſe refuſing to march into Spain and join him, Charles was obliged to abandon Madrid, and retire towards Catalonia, being followed by the army: but the Engliſh, commanded by General Stanhope, having been ſeparated from that part of the allied army commanded by General Staremberg, were ſurrounded by King Philip's

forces, in the town of Brihuega, and made priſoners of war. Staremberg, in the mean time, receiving advice of the march of the Spaniards, to ſurprize the Engliſh in Brihuega, marched to their relief; and finding the Engliſh had ſurrendered a little before, he engaged the French and Spaniards, at Villa Vitioſa, and defeated them: but underſtanding that they were ſoon to be reinforced, he continued his march into Catalonia, whither King Charles had retreated ſome time before. In the mean time the towns of Aire and St. Venant, in Flanders, ſurrendered to the allies.

In 1711, the French having plundered the town of St. Sebaſtian, and ſeveral other rich ſettlements of the Portugueſe, in Brazil, the King of Portugal thought fit to enter into a treaty of peace with the French, without the concurrence of the allies, who made themſelves maſters of Bouchain, in the Netherlands, during this campaign; and the following winter the French made propoſals of peace to the Britiſh court, about which time the Emperor Joſeph died, and his brother King Charles was elected Emperor at Franckfort, upon the 12th of October, 1711.

By the treaty of Utrecht, in 1713 *, Philip was acknowledged King of Spain by all the confederates, except the Emperor. The allies contented themſelves with ſuch limitations and

* See Vol. IV. p. 45. and Vol. V. p. 209.

reſtric-

reſtrictions as might keep the two monarchies of France and Spain diſunited, though a treaty of partition may be ſaid to have taken place at laſt: for, by the articles of peace, Philip was left in poſſeſſion of Spain only, and its American colonies, and ſettlements in the Eaſt Indies; the Spaniſh dominions in Italy, and the iſlands of Sicily and Sardinia, were diſmembered from the monarchy, which had alſo loſt the iſland of Minorca, and the fortreſs of Gibraltar, both which places were ceded to Great Britain. The Duke of Savoy was put in poſſeſſion of the iſland of Sicily, with the title of King; and the Emperor Charles had Milan, Naples, and Sardinia.

Though, by the peace of Utrecht, Philip was left in poſſeſſion of the greateſt and moſt important part of the Spaniſh monarchy, yet ſome obſtinate enemies ſtill remained to be reduced. The inhabitants of Catalonia refuſed to acknowledge him; and finding themſelves abandoned by their allies, ſolicited the aſſiſtance of the Grand Signior, in hopes of eſtabliſhing themſelves into an independent ſtate. Their example was followed by the iſland of Majorca: but the province of Catalonia was reduced to the obedience of King Philip, by the Duke of Berwick, in the year 1714; and Majorca was compelled to ſubmit to that prince in 1715.

The reduction of Catalonia reſtored tranquility to Spain, which had been haraſſed for twelve years by a moſt cruel and bloody war.

Philip, by that conqueſt, finding himſelf ſeated upon the throne, began to turn his thoughts towards the reunion of his Italian dominions, which, with the utmoſt regret, he had ſeen wreſted from him. With a view to this reunion, his firſt wife, Maria Louiſa, daughter to the Duke of Savoy, dying in 1714, he married, the ſame year, the Princeſs Elizabeth Farneſe, heireſs of Parma, Placentia, and Tuſcany; which match being negociated by Alberoni, an Italian eccleſiaſtic, the Queen procured a cardinal's cap for him, and by her influence he ſoon after became prime miniſter of Spain.

Philip having now increaſed his navy, and being urged by Alberoni to renew the war in Italy againſt the Emperor Charles, who gave juſt foundation for a rupture, by ſtill retaining the title of King of Spain, by creating Spaniſh grandees, by protecting thoſe who were diſaffected to Philip, and by puniſhing thoſe who remained faithful to him, with the forfeiture of their eſtates in Flanders and Italy, the King, in 1717, invaded the iſland of Sardinia, and made a conqueſt of it. The next year, he invaded Sicily, and made a conqueſt of the greateſt part of that iſland; upon which, the Emperor, Great Britain, France, and Holland, entered into a confederacy againſt Spain, which confederacy was called the quadruple alliance *; and the Britiſh Admiral Sir George

* See Vol. IV. p. 58. *& ſeq.*

Byng,

Byng, being ſent to the Mediterranean with a ſtrong ſquadron, and coming up with the Spaniſh fleet in the Streight of Meſſina, engaged them, in July, 1718, and took eleven, and burnt ſix of their men of war. He alſo tranſported a body of Germans to Sicily, to oppoſe the Spaniſh General the Marquis de Leyde; and ſeveral ſmart engagements happened there between the Germans and the Spaniards.

In the mean time, the French invaded Spain on the ſide of Guipuſcoa, took Port Paſſage, and burnt ſeveral Spaniſh men of war; they afterwards took Fontarabia, and St. Sebaſtians, and reduced the whole province of Guipuſcoa. The Britiſh forces, commanded by Lord Cobham, alſo made a deſcent upon Spain, and took Vigo, and there reimbarked. On the other hand, the Spaniards embarked ſix thouſand men, with a deſign to invade Britain, in favour of the Pretender, of which forces three hundred only landed in Scotland, and were joined by a ſmall body of Highlanders: but they were ſoon defeated and diſperſed *. About the ſame time, a few ſhips ſailed from Vigo to the coaſt of Britany, in hopes of raiſing an inſurrection in that province againſt the Duke of Orleans, regent of France: but this attempt had no better ſucceſs than the other. King Philip, at length, finding himſelf unable to reſiſt ſo potent a confederacy,

* See Vol. IV. p. 60. & *ſeq.*

entered

entered into a treaty with the allies, and conſented to evacuate Sicily and Sardinia, upon which Sicily was allotted to the Emperor, and the King of Sicily made King of Sardinia: the French reſtored to Spain all their acquiſitions in Guipuſcoa; and Cardinal Alberoni, who had been the occaſion of this war, was ſoon after diſgraced, and obliged to return to Italy. In the mean time, Philip ſent the Marquis de Leyde with a conſiderable fleet and army, to the relief of Ceuta, which had been beſieged for twenty-ſix years by the Moors. The Spaniſh troops, a few days after their arrival, totally routed and diſperſed the Moors, and made themſelves maſters of their intrenched camp, and all their artillery.

As the Duke of Orleans, ſince the diſgrace of Alberoni, had ſeemingly favoured the pretenſions of Spain, Philip, the following year, at his ſolicitation, contracted a double alliance with the branches of the houſe of Bourbon in France. The Infanta of Spain, though then only three years of age, was ſent to France, as future Queen to Lewis the Fifteenth; and two of the daughters of the Duke of Orleans arrived in Spain to be married to the Prince of Aſturias, and the Infant Don Carlos. The ſucceſſion of this laſt to the dutchies of Parma and Tuſcany, ſeemed now to be the chief object of the court of Spain. This point and many others were to be ſettled at Cambray; but as the Emperor, who had no inclination to gratify the Spaniards, purpoſely delayed the con-

congreſs, Philip concluded a particular treaty with the court of Great Britain, who, on having the aſſiento, or contract for ſupplying the Spaniſh colonies with negroes, renewed, agreed to reſtore the ſhips taken off Sicily.

Nothing memorable happened in Spain during the two following years; but in the beginning of the year 1724, Philip aſtoniſhed all Europe, by publicly abdicating his crown, before he was forty years of age, in favour of Don Lewis, Prince of Aſturias, who was then in the ſeventeenth year of his age; and who was accordingly proclaimed King at Madrid, to the great joy of the Spaniards: but this joy however was ſoon turned into mourning, by the unexpected death of the King, who died of the ſmall-pox univerſally lamented, in the eighth month of his reign. Upon the death of Lewis, Philip was perſuaded to reſume the reins of government; and, in 1725, ſurpriſed all the powers of Europe, by concluding a particular treaty with the Emperor at Vienna, by which he reſigned all pretenſions to Naples, Sicily, the Low Countries, and the Milaneſe. Charles, on the other hand, renounced all claim to Spain and the Indies; and beſides promiſed to grant the inveſtiture of Parma and Tuſcany to Don Carlos. Philip ſoon after entered into an offenſive and defenſive alliance with the court of Vienna; to counterbalance which, the courts of Great Britain, France, and Pruſſia, concluded a mutual alliance at Hanover.

The

The ſyſtem of Europe by theſe treaties ſeemed again changed, eſpecially as Philip was at this time greatly irritated againſt the French miniſtry, for ſending back the Infanta Queen to Spain, and marrying their king to the Princeſs Lezenſki, daughter to Staniſlaus, King of Poland: he therefore now cloſely connected himſelf with the Court of Vienna. Baron Riperda, who had concluded the Vienna treaty, on his return from thence, was created a duke, and grandee of Spain, and was entruſted with the departments of war of the marine, the finances, and the Indies: but his adminiſtration not being approved by the grandees, whoſe reſentment he dreaded, he reſigned his places, and took refuge in the houſe of Mr. Stanhope, the Britiſh ambaſſador, from whence he was taken by force, and impriſoned, but found means to eſcape; and the Britiſh ambaſſador, in reſentment for the breach of his privileges, left Madrid.

The emperor, who was offended with the oppoſition he met with from Great Britain, in eſtabliſhing an Eaſt-India company at Oſtend, fomented differences between this court and Spain; and was ſo ſucceſsful, that, about the end of February, in the year 1727, the Spaniards laid ſiege to Gibraltar, which enterprize, however, they ſoon found to be above their ſtrength; and after four months in open trenches, were obliged to retire with diſgrace. The Biſhop of Frejus, afterwards known by the name of Cardinal Fleury, was,

at this time, labouring to bring about a general pacification among the powers of Europe, and had prevailed on the Emperor, the King of Great Britain, and the States General, to agree with France, in ſigning the preliminaries for a peace; and the Spaniards, who wanted a fair pretence to withdraw from Gibraltar, ſoon after acceded to theſe preliminaries. A general congreſs being then appointed to be held at Soiſſons, Philip ſent three plenipotentiaries thither; and ſoon after ſent an ambaſſador for the firſt time to Ruſſia, who concluded a treaty of commerce between the two nations.

As the negociations at Soiſſons met with many interruptions, on account of the various claims of the different princes who had ſent their plenipotentiaries thither; Philip, in 1729, concluded a particular treaty at Seville with Great Britain and France, to which the States General afterwards acceded. By this treaty, Philip promiſed no longer to countenance the Oſtend company; and the other powers, in return, engaged to guarantee the ſucceſſion of Don Carlos to the Dutchies of Tuſcany, Parma, and Placentia, and to aſſiſt in introducing 6000 Spaniards into theſe territories. The emperor, who could not bear the thoughts of ſeeing Spaniſh troops in Italy, was greatly offended with this treaty, and endeavoured by artifice to render it ineffectual. Accordingly, two years after, when the ſucceſſion to Parma and Placentia opened to Don Carlos, by the death

death of the laſt Duke of the Farneſe family, the emperor's troops took poſſeſſion of ſeveral fortified places in thoſe dukedoms, under pretence that the widow of the late duke had been left with child by him. Charles, however, ſeeing no way of ſecuring thoſe dutchies by negociation, and being ſenſible that the cheat would ſoon be detected, agreed at length to ſuffer 6000 Spaniards to accompany Don Carlos into Italy, and alſo engaged to ſuppreſs the Oſtend company, which had given ſo much offence; Great Britain, on the other hand, engaging to guarrantee the emperor's dominions in Italy. Soon after, a Britiſh fleet joined that of Spain, and conducted the Infant Don Carlos to Leghorn, who quietly took poſſeſſion of Parma, which had been deſtined to him as his inheritance ever ſince his birth.

The ſettlement of Don Carlos being accompliſhed, the court of Spain turned its views to the recovery of Oran. An army of 25,000 men was accordingly ſent to Africa, under the command of the Count de Montemar, who totally defeated the Mooriſh army, and, in leſs than a month, made himſelf maſter of the place, though it was defended by a garriſon of 10,000 men. The recovery of their African poſſeſſions, was far from ſatisfying the ambition of the Spaniſh court, who now eagerly embraced an opportunity of breaking with the emperor, and extending their dominions in Italy. The throne of Poland becoming

vacant, by the death of the Elector of Saxony, the greateſt part of the poles elected Staniſlaus, who had formerly been King of Poland: but a few of the moſt powerful choſe the new Elector of Saxony, and the ſon of the late king. Staniſlaus was ſupported by his ſon-in-law the King of France, who, on this occaſion, entered into an offenſive and defenſive alliance with the Kings of Spain and Sardinia. The Emperor Charles, and the Czarina, eſpouſed the cauſe of the other competitor.

The war which enſued, was very favourable to the Spaniards; who, in one campaign, made an entire conqueſt of the kingdom of Naples, in 1734. The year following, Don Carlos completed the conqueſt of Sicily, and was crowned King of the Two Sicilies at Palermo, the capital of the iſland. The emperor, in the mean time, being turned out of almoſt all his poſſeſſions in Lombardy and Tuſcany, and being alſo unable to oppoſe the French armies on the Rhine, ſolicited the mediation of the maritime powers, who, by threatning to take part in the war, prevailed on the contending parties to agree to a ſuſpenſion of arms, about the beginning of winter; and as the Elector of Saxony was by this time ſecurely fixed upon the throne of Poland, and the interceſſion of the maritime powers cut off all hopes from the French and Spaniards of enlarging their conqueſts in Italy and Germany, they were obliged to continue the armiſtice, and to negociate a peace.

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The preliminary articles of the treaty, which were ſettled by the courts of Vienna and Paris, being publiſhed in the year 1736, were far from being ſatisfactory to the court of Spain, becauſe though they were allowed to keep Naples and Sicily, it was propoſed they ſhould reſtore Parma and Placentia to the emperor, and renounce all claim to Tuſcany. The maritime powers, however, acquieſcing in the diſpoſition that had been made, Spain was obliged to ſubmit; and the year following, upon the death of John Gaſton de Medicis, the laſt male deſcendant of that illuſtrious family, the Spaniſh troops evacuated Tuſcany, which by the treaty then negociating, was given to the Duke of Lorrain and Bar, who, in the beginning of the preceding year, had married the Arch-dutcheſs Maria Thereſa, the heireſs of the family of Auſtria. In November, 1738, the peace, which had been negociating near three years, was concluded at Vienna. By this peace, Parma and Placentia were ceded in full propriety to the emperor, and his ſon-in-law was declared Duke of Tuſcany; the duke, in return, ceding his dutchies of Bar and Lorrain to the exiled King Staniſlaus, upon whoſe death they were to be annexed to the crown of France. The fiefs of the Fortoneſe and Vigevanſca were detached from the Milaneſe, in favour of the King of Sardinia, and Don Carlos was left in poſſeſſion of the kingdoms of Naples and Sicily, with ſome places on the coaſt of Tuſcany.

The treaty of Vienna was ſcarcely ratified, when Spain was threatned with a war by Great Britain, on account of the diſputes which for ſome time had ſubſiſted between the two courts, about the freedom of commerce in America. The Britiſh court had for ſome years made loud complaints of the piracies and hoſtilities committed in the American ſeas by the Spaniſh guarda-coſtas, who, on trifling and falſe pretences, ſeized the Britiſh ſhips in their paſſage to their own colonies, and not only made prize of them, but treated their crews with the greateſt inhumanity. The court of Spain, on the other hand, alledged, that the Britiſh merchants, in violation of ſolemn treaties, had, for many years, carried on a clandeſtine trade with the Spaniſh colonies in America, by which the commerce of Spain had been greatly prejudiced; that Spain was therefore greatly intereſted in putting a ſtop to ſuch illicit traffic, and that thoſe who were ſeized in carrying it on, could not juſtly complain of any injury.

Both nations inſiſted loudly on the injuries they had received *, and the court of London was at length provoked to iſſue letters of repriſals againſt the Spaniards, their veſſels, and effects. This ſtep was ſoon followed by declarations of war at London and Madrid: and both nations began hoſtilities with great animoſity. The Spaniards, at firſt, made ſome

* See Vol. IV. p. 78 & *ſeq.*

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conſiderable advantages by the capture of a great number of Engliſh ſhips, but they were ſoon alarmed with the news of the loſs of Porto Bello, which was taken in the beginning of December, 1739, by Admiral Vernon. About the ſame time they ſuffered conſiderably by the ravages of the Barbary Corſairs on their coaſts, and were threatned with the loſs of their richeſt provinces in America, by a conſpiracy, formed by one Cordova, who pretended to be deſcended from one of the ancient Incas of Peru. The conſpiracy, however, was happily diſcovered, before it took effect, and the author of it put to death.

The following year, the Spaniards ſent a fleet of eighteen ſhips of the line to the Weſt-Indies, with a deſign, as was ſuppoſed, of attacking Jamaica. The French, likewiſe, though they profeſſed a neutrality, ſent two ſquadrons to the American ſeas, to act defenſively, in favour of the Spaniards, while Admiral Vernon bombarded Carthagena, and took Chagre. About the ſame time, General Oglethorpe, governor of Georgia, attacked Fort St. Auguſtine, the capital of Spaniſh Florida: but after lying ſome weeks before the place, he was obliged to retire, with conſiderable loſs. About the end of October, 1740, the Engliſh ſent out a powerful fleet, to reinforce Admiral Vernon, who, the year following, in the month of March, inveſted Carthagena by ſea and land, with a fleet of 29 ſhips of the line, and an army of about 12,000 men: but the

the Spaniſh garriſon, having been reinforced, and the ſeaſon of the year being very unfavourable to troops in the field, the Engliſh, after a ſiege of ſome weeks, were obliged to retire with the loſs of ſome thouſand men. In the mean time, Admiral Anſon, who had ſailed round Cape Horn, acted offenſively againſt the Spaniſh ſettlements in the South-ſea.

About this time, Philip had publiſhed a memorial, claiming the ſucceſſion of the hereditary dominions of the Emperor Charles the Sixth, who died in the month of October, and was ſucceeded by his daughter Maria Thereſa, who took the title of Queen of Hungary. All that the catholic king aimed at by this claim, was the ſecuring of Lombardy for his third ſon Don Philip, which he thought would at this time be an eaſy prize, as the Queen of Hungary was unexpectedly attacked by the King of Pruſſia, and alſo by the Elector of Bavaria, who was aſſiſted by the Kings of France and Poland. However, while the fate of Carthagena depended, the Spaniards made not the leaſt efforts againſt their new enemy: but, upon receiving the news of the repulſe of the Engliſh, they aſſembled a body of troops at Barcelona, which ſailed for Naples, in November, under the command of the Duke de Montemar. Thoſe troops were reinforced the year following, 1742, from Spain, and, being joined by the Neapolitans, formed an army of about 60,000 men. Montemar then ad-

advanced through the eccleſiaſtical ſtate, as far as the Bologneſe, but the King of Sardinia declaring for the Queen of Hungary, and joining the Auſtrian army, the Spaniards were obliged to retreat in the end of the ſummer, to the kingdom of Naples, where, ſoon after their arrival, they loſt their Neapolitan allies; Don Carlos being forced to agree to a neutrality, by a Britiſh ſquadron, which threatned to bombard his capital.

In the mean time, Don Philip, after marching through France, at the head of 30,000 men, had now entered Savoy, and taken poſſeſſion of Chamberry, expecting to conquer that dutchy, while the King of Sardinia was oppoſing Montemar: but the Piedmonteſe, having left the purſuit of Montemar, quickly attacked him, and obliged him to return to France. The Spaniards, notwithſtanding the bad ſucceſs of their arms, were ſtill bent upon purſuing their ambitious views in Italy, where they ſupported their armies at a great expence, for ſeveral campaigns. The Count de Gages and their other generals, inſtead of having any proſpect of making conqueſts in that country, found themſelves every year obliged to ſtruggle with new obſtacles, and any flattering ſucceſſes they met with, were more than counter-ballanced, by the advantages gained by the enemy.

Admiral Vernon, after his return from Carthagena, made a deſcent upon Cuba, and afterwards

terwards upon Panama, but without ſucceſs *. The Spaniards at St. Auguſtine, in the mean time, made an attempt upon Georgia, with two frigates, and thirty other veſſels, on board of which were 3000 land-forces; but General Oglethorpe obliged them quickly to retire. In 1743, Admiral Knowles made an attack upon La Guira, and Porto Cavallo, but was repulſed by the Spaniards with conſiderable loſs; and the year following, upon the 11th of February, Admiral Matthews attacked the Spaniſh and French fleets off Toulon, but the engagement was prevented from being general, by the French declining to come into the line, on one hand, and the backwardneſs of Admiral Leſtock on the other: however, the Spaniſh ſhips that engaged, were defeated by the Engliſh.

From this time, nothing remarkable happened in the affairs of Spain, till the 11th of July, 1746, when Philip died at Madrid, in the 63d year of his age, and was ſucceeded by the only ſurviving ſon of his firſt marriage, Don Ferdinand. By his ſecond queen, Elizabeth of Farneſe, who is ſtill alive, Philip left three ſons, Don Carlos, then King of the Two Sicilies; Don Philip, the preſent Duke of Parma and Placentia; and Don Lewis, who was created Archbiſhop of Toledo, when an infant; but has ſince reſigned that benefice, and obtained leave to quit the church. By the

* See Vol. IV. p. 81.

ſame

ſame queen, he alſo left three daughters, Maria Anna Victoria, the preſent Queen of Portugal; Maria Thereſa, in 1745 married to the Dauphin of France; but died in child-bed a few days after her father, and Maria Antonietta.

Ferdinand the Sixth, who was about thirty three years of age, when he aſcended the throne, began his reign with ſeveral acts of popularity, and ſoon publiſhed an edict, declaring, that he would fulfil the engagements of his predeceſſor with his allies. The Spaniards this campaign were twice defeated in Lombardy, with the loſs of upwards of 20,000 men, killed and made priſoners, and had been forced by the Auſtrians to abandon Italy, and retire into Provence. Ferdinand, however, ſtill continued the war, and imputing the diſgrace of his arms to the miſconduct of the Count de Gages, recalled him, and gave the command to the Marquis de la Minas. About the end of the year, he allowed the chamber of commerce to enter into a private treaty with the Engliſh South-ſea company, for ſupplying Spaniſh-America with negroes; but could not be prevailed upon by the King of Portugal, to agree to a ſeparate peace with Great Britain. His allies, the French, however, ſuffering greatly in the following year, 1747, by the deſtruction of their fleets, the ruin of their commerce, and a general famine, which obliged them to ſollicit a congreſs, he alſo gave his conſent for a peace.

By

By the treaty of Aix-la-Chapelle, which was concluded in October, 1748, and contained twenty-four articles *, the Queen of Hungary ceded to the Infant Don Philip the Duchies of Parma, Placentia, and Guaſtalla, but with this reſerve, that if Philip ſhould die without male iſſue, or he or his poſterity ſhould ſucceed to the throne of Spain or Sicily, thoſe duchies ſhould revert to the houſe of Auſtria. As the King of Sardinia had ſome pretenſions to Placentia, and the Placentine, his ceſſion was likewiſe neceſſary, which he gave, on condition that the territory ſhould revert to him, if Philip ſhould die without iſſue male, or his brother Don Carlos ſucceed to the crown of Spain. By other articles of the ſame treaty, the King of Sardinia, the Republic of Genoa, and the Duke of Modena were reinſtated in their former poſſeſſions; and the aſſiento, or contract for negroes, with the Britiſh merchants, was granted for four years, as an equivalent for the ſame number of years which had been interrupted by the war.

Notwithſtanding the peace of Aix-la-Chapelle, Ferdinand ſtill kept up all his land-forces, and gave orders for augmenting his marine, with the utmoſt diligence. The Marquis de Enſenada, who was now prime miniſter, being ſenſible of the great prejudice the Spaniſh commerce ſuſtained by the clandeſtine

* See Vol. IV. p. 102, & *ſeq.*

trade

trade carried on by foreigners with the Spaniſh colonies, gave orders for guarding the American coaſts more ſtrictly than ever, which orders were not only diſagreeable to the trading nations of Europe, but to the inhabitants of the colonies themſelves, who, in 1749, roſe up in arms, in the province of Caraccas, obliged the Spaniſh troops to retire into the fort of La Guira, and declared for a freedom of commerce. Upon the news of this inſurrection, 1500 men were embarked at Cadiz, who, upon their arrival in America, were ſo ſucceſsful as to quell the rebellion. The King, in the mean time, applied his chief attention to regulate the internal policy of his kingdom, and inſpire his ſubjects with a ſpirit of induſtry. He particularly aimed at encouraging and promoting agriculture: and granted charters for eſtabliſhing manufactures of fine woollen cloth; gave great encouragement to ſome Britiſh weavers and ſhip-carpenters, who had been tempted to go and ſettle in Spain, and he opened the communication between the Two Caſtiles, by a fine road, forty ſix miles in length, on which were no leſs than 283 aqueducts, and ſeven bridges of fine architecture; the whole being begun and finiſhed, in five months, under the direction of the Marquis de Enſenada.

In the mean time, the Spaniſh and Britiſh commiſſaries were employed in negociating the diſputed points betwixt the two courts, which were at length finally ſettled, by a

treaty concluded at Madrid, on the 5th of October, 1750. By this treaty, the King of Great Britain gave up his claim to the four remaining years of the aſſiento contract, and to all debts the King of Spain owed to the Engliſh company on that account, for an equivalent of 100,000 l. ſterling. His catholic majeſty engaged, to require from Britiſh ſubjects trading in his ports, no higher duties than they paid in the time of Charles the Second of Spain, and to allow the ſame ſubjects, to take ſalt on the iſland of Tortuga. All former treaties were confirmed, and the two princes promiſed to aboliſh all innovations that appeared to have been introduced into the reciprocal commerce of both nations.

The remaining part of Ferdinand's reign was barren of events. The Britiſh court were jealous of his attempts to introduce the woollen manufacture in Spain, and reclaimed their workmen, who had paſſed over thither. New diſputes likewiſe aroſe between the two courts on account of the traffic carried on by Britiſh ſubjects with the Indians of the Moſkito ſhore, who had never ſubmitted to Spain, and claimed to act as a free nation. In 1754, the Marquis de Enſenada was unexpectedly diſgraced, and the department of the Indies, one of the places he enjoyed, was conferred on Don Richard Wall, ſecretary of ſtate for foreign affairs, who had lately returned from an embaſſy at the Britiſh court. About two years afterwards, a war breaking out between Great

Great Britain and France, Ferdinand declared on that occaſion, that he would adhere to the ſtricteſt neutrality, though he was far from preſerving the neutrality he profeſſed, and was partial in favour of France in many inſtances.

Ferdinand was ſo affected with grief, upon the loſs of his queen, who died about the end of the year 1758, that he entirely abandoned himſelf to melancholy; and, neglecting both exerciſe and food, was thrown into a dangerous diſtemper, which, after preying upon him ſeveral months, put a period to his life, on the 10th of Auguſt, 1759; and as he left no iſſue, was ſucceeded by his brother Charles, King of the Two Sicilies, who reſigned that kingdom, and disjointed it from the monarchy of Spain, by a ſolemn deed, in favour of his third ſon, ſetting aſide his eldeſt ſon, on account of his weakneſs of mind, and reſerving his ſecond ſon for the ſucceſſion of Spain. The principal tranſactions of the preſent reign, relating chiefly to the war, which broke out between Great Britain and Spain, in the beginning of the year 1762, have been already mentioned *; it is therefore neceſſary to obſerve here in general, that, as the Spaniards were unſucceſsful in that war, they were obliged, before the cloſe of the ſame year, to purchaſe a peace, by making a ceſſion to

* See Vol. IV. p. 133. & *ſeq.*

Great Britain of all Florida, by allowing his Britannic Majeſty's ſubjects to cut logwood in the Bay of Campeachy; and by renouncing all pretenſions to a fiſhery upon the coaſt of Newfoundland. So much for the affairs of Spain.

The name PORTUGAL, is ſuppoſed to have been derived from *Portus Calis*, the ancient name of Porto, or Oporto, which was probably a contraction and corruption of *Portus Gallorum*, a name that might have been given to this town, from having been the port, which the Gauls frequented in the time of the Romans. The Roman name for the country was, *Luſitania*, which ſome ſuppoſe to be a word compounded of the Phoenician word *Lus*, which ſignifies an *almond*, with which fruit this country abounds, and *Tannia*, the Greek word for a *country*. Others derive the name *Luſitania* from *Lyſus*, the ſon of Bacchus, and and will have it to ſignify *the Country of Wine*.

The Carthaginians and Romans ſucceſſively poſſeſſed this country; the Romans were expelled by the Suevi, a northern nation, who were ſoon driven out of Portugal, by the Goths, who poſſeſſed this, with the reſt of Spain, till the Moors made a conqueſt of the whole country in the eighth century. The generals of the Moors divided Portugal, as they did the reſt of Spain, into abundance of little principalities; every captain aſſuming the title

title of a king, and exerciſing a ſovereign power in that part of the country he had poſſeſſed himſelf of by force of arms.

In the year 1093, Alphonſo the Sixth, King of Leon, and the firſt of Caſtile, having made a conqueſt of the northern provinces of Portugal, conſtituted Henry, a younger ſon of Robert, Duke of Burgundy, whoſe father was Robert King of France, Earl of Portugal, for the ſignal ſervice he had performed againſt the infidels. In 1139, Alphonſo, the ſon of Henry, having freed himſelf from the ſubjection of the King of Caſtile, and reduced moſt of the ſouthern part of Portugal, as far as the mountains of Algarve, was proclaimed by his army, King of Portugal, and his ſucceſſors continued the war with the Moors, till they got poſſeſſion of all that country.

The crown continued in this line, till the death of Ferdinand, without iſſue male, in 1383, when his natural brother, John, uſurped the throne, in 1385. This prince maintained a war againſt the Caſtilians, and, being aſſiſted by the Duke of Lancaſter, with a gallant army, from England, carried his conqueſts into the heart of Caſtile. At length, a peace being agreed on between the crowns of Caſtile and Portugal, John entered upon an expedition againſt the Moors in Africa, and took the town of Ceuta. The Madeira iſlands, together with the Azores, or weſtern iſles, being diſcovered in this reign, were add-

ed to the Kingdom of Portugal, together with the coaſt of Guinea. John dying in 1433, was ſucceeded by his ſon Edward, who died of the plague, in 1438.

Upon the death of Edward, his ſon Alphonſo ſucceeded to the crown: this prince invaded Morocco, and took the towns of Tangier, Arcilla, Alcaſſar, and ſeveral others on the coaſt of Africa, from the Moors. He afterwards laid claim to the crown of Caſtile, invaded that kingdom, and reduced many cities under his ſubjection, but was at length driven out of that country by Ferdinand and Iſabella, King and Queen of Caſtile and Arragon; and, dying in 1481, was ſucceeded by his ſon John, who projected the tracing out a way to the Eaſt Indies, round Africa by the Cape of Good Hope. He died in the year 1495, and leaving no iſſue, was ſucceeded by his couſin Emanuel, ſon of the Duke of Viſco, and grandſon of King Edward. He was oppoſed in his ſucceſſion to the throne by the Emperor Maximilian, who laid claim to the crown, as being the ſon of Eleonora, the daughter of King Edward: but the Portugueſe, being averſe to a ſtranger, and finding in Emanuel all thoſe qualifications requiſite in a prince, adhered to him. He married Iſabella, eldeſt daughter of Ferdinand the Catholic, who it is ſaid perſuaded him to baniſh the Jews and Moors out of Portugal, on pain of being made ſlaves, if they remained in the kingdom after a certain day; upon which the Moors went over to Africa.

Africa. In the reign of Emanuel, Portugal arrived at its higheſt pitch of glory: for then it was, the fleets of Portugal were conducted round the Cape of Good Hope to India, by the celebrated Vaſco de Gama, by which diſcoveries the Portugueſe became ſole maſters of the trade between India and Europe, which was before carried on by the way of Egypt, whither the riches of India being brought, were tranſported by the Venetians, Genoeſe, and other maritime powers in the Mediterranean, to Europe. In making the voyage to the Eaſt Indies, the Portugueſe caſually diſcovered Brazil in America, and ſeveral rich provinces on the coaſt of Africa, from all which there flowed ſuch immenſe treaſures to Portugal, during this reign, that it obtained the name of the golden age.

King Emanuel dying in 1521, was ſucceeded by his ſon John the Third, who had a long, peaceful and happy reign, during which he applied himſelf to cultivate the arts and ſciences at home, and to plant colonies in the countries that had been diſcovered, in his father's reign, in Aſia, Africa, and America. He alſo ſent out a multitude of miſſionaries, who planted the Chriſtian religion in China, India, the coaſt of Africa, and Braſil, in which he was no leſs ſucceſsful than in his civil government: but dying, in 1557, he was ſucceeded by his grandſon Sebaſtian, an infant of three years of age, Cardinal Henry, his uncle, having the adminiſtration during his minority.

This

This prince, as ſoon as he arrived at the years of manhood, appeared much addicted to martial exploits, and went over into Africa, at the head of a powerful army, at the inſtance of Mulley Hamet, King of Morocco, who had been depoſed by Mulley Mulucco, his uncle, and joining Mulley Hamet, both Kings attacked the uſurper with their united forces, but were defeated; Don Sebaſtian, and moſt of the Portugueſe nobility, together with Mulley Hamet, the depoſed prince, being killed in the engagement, which Mulley Mulucco, the uſurper did not ſurvive, but died of a fever before the engagement was well over. Don Sebaſtian, leaving no iſſue, was ſucceeded by Cardinal Henry, his uncle, the only ſurviving male of the royal family; and he dying after a ſhort reign of two years, Philip the Second, King of Spain, ſent the Duke of Alva into Portugal, at the head of an army, and in 1580 took poſſeſſion of that kingdom, which he claimed in right of his mother. The Portugueſe indeed ſet up Anthony, natural ſon to the late King John the Third, who received ſome aſſiſtance from England, in order to maintain his pretenſions; but the King of Spain was too powerful for his competitor, who was obliged to quit his claim to the crown of Portugal.

Philip maintained his dominion over Portugal till he died, as did his ſon Philip the Third of Spain, and Second of Portugal. Philip the Fourth, his grandſon, alſo ſucceeded quietly to the

the kingdoms of Spain and Portugal, which he enjoyed for nineteen years. In the mean time, the Dutch, having ſhaken off the Spaniſh yoke, poſſeſſed themſelves of the greateſt part of the ſettlements of the Portugueſe, who were provoked to the laſt degree; and finding Spain much weakened by a long and expenſive war with France, and the revolt of the Catalons, embraced that opportunity of delivering their country from a foreign yoke. The Duke of Braganza, being the next heir in blood to their former princes, they raiſed him to the throne, in the year 1640, when, on the firſt day of December, he was proclaimed by the name of John the Fourth.

King John having made war upon the Dutch, whom he drove out of Brazil, died in 1656, leaving two ſons, Don Alphonſo, his eldeſt ſon, who ſucceeded him, Don Pedro, and one daughter, named Catharine, afterwards married to Charles the Second, King of Great Britain. Alphonſo being very young at his father's death, reigned ſome time under the guardianſhip of his mother, who was very ſucceſsful, during her adminiſtration, againſt Spain: for Philip the Fourth, having made peace with France, revived his claim upon Portugal, and invaded that kingdom, but was defeated in ſeveral engagements, the moſt important victory being that at Villa Vitioſa, in the year 1666, which obliged Philip to renounce all his pretenſions to the crown of Portugal.

King

King Alphonſo coming of age, the Queen-dowager, who did not approve of his conduct, retired into a convent, where ſhe died; after which Alphonſo married the Princeſs of Nemours, of the houſe of Savoy, who conſpired with Don Pedro againſt the King, whom they depoſed, in 1668, and confined a priſoner in the iſland of Tercera, from whence he was brought back ſome time after, and died in the caſtle of Cintra, in December 1683. Don Pedro, having depoſed his brother, procured a diſpenſation from the Pope, and married the Queen, in her huſband's life-time, and took upon himſelf the adminiſtration of the government, in the King's name, till the death of that unhappy prince, upon which he cauſed himſelf to be proclaimed King of Portugal.

In the firſt war between the confederates and France, which broke out in 1689, Portugal ſtood neuter. In the ſecond war, the Portugueſe came into the grand alliance in 1703, on the following conditions, viz. that the Archduke Charles, who was to be proclaimed King of Spain, ſhould be ſent to Portugal, with an army of twelve thouſand Engliſh and Dutch troops; that the allies ſhould take into their pay thirteen thouſand Portugueſe, and fit out a large fleet to protect the coaſts of Portugal. King Charles was accordingly conveyed to Portugal *, by the confederate fleet, with the forces agreed on. But the Engliſh and Dutch,

* See Vol. IV. p. 33.

who

who had promiſed themſelves great advantages from the King of Portugal's acceſſion to the grand alliance, found themſelves greatly diſappointed; not a third part of the horſes were provided, for remounting their cavalry, that had been promiſed. The Portugueſe generals, and every governor of a province, through which they paſſed, inſiſted upon commanding the confederate generals, and inſiſted moreover that the Portugueſe forces ſhould take the right hand of the allies. They would not ſuffer the Engliſh and Dutch troops to march in a body; but diſtributed them in their defenceleſs frontier towns, where many of them were made priſoners by the enemy; upon which Duke Schomberg, who commanded the Engliſh troops, deſired to be recalled, and the Earl of Galway was ſent over in his room, who ſubmitted to all the indignities the Portugueſe were pleaſed to impoſe on the forces of Great Britain and Holland; and as the Portugueſe did not bring into the field, half the forces they had engaged to furniſh, and their horſes uſually ran away, they contributed very little to the advancement of the cauſe of the allies.

Pedro dying in 1706, was ſucceeded by his ſon John; and that prince dying in 1750, his eldeſt ſon Joſeph, the preſent King, mounted the throne of Portugal. In the year 1762, the Kings of France and Spain, by repeated memorials, required the King of Portugal to join in the confederacy againſt Great Britain, and to admit Spaniſh troops into the principal

towns

towns of Portugal; and upon his Portugueſe Majeſty's refuſing to comply with thoſe extraordinary demands, the French and Spaniards declared war upon Portugal, which they entered with ſeveral conſiderable armies; but the treaty of peace, concluded in February, 1763, put a period to their progreſs in that kingdom.

THE

BEAUTIES

OF

NATURE AND ART

DISPLAYED;

IN A

TOUR through the WORLD.

CHAP. IV.

OF

ITALY.

CHAP. IV.

Of ITALY.

SECT. I.

A general Account of ITALY.

ITALY, the antient ſeat of the Roman Empire, and perhaps the moſt celebrated ſpot of ground on the globe, is agreeably and advantageouſly ſituated in the ſouth of Europe, lying between the 37th and 46th degrees of north latitude, and between the 7th and 19th degrees of eaſt longitude.

Its greateſt length from Auſte in the duchy of Savoy in the north, to Cape Spartivento in Calabria in the ſouth, is about 900 miles; and its greateſt breadth, from Chamberry in Savoy, to Udina in Venice, is computed to be 560 miles.

Its boundaries are, on the north and north-weſt the Alps, and the river Var, which ſeparate it from France and Switzerland; the

Gulph of Venice on the eaſt; and on the ſouth and weſt, the Mediterranean ſea.

This country conſiſts of the following ſovereignties and principalities. 1. The duchy of Savoy. 2. The principality of Piedmont. 3. The duchy of Montferrat. 4. The duchy of Milan. 5. The republic of Venice. 6. The duchy of Mantua. 7. The duchy of Parma. 8. The republic of Genoa. 9. The duchy of Modena. 10. The dukedom of Tuſcany. 11. The Pope's territories. 12. The republics of Lucca and St. Marino. 13. The kingdom of Naples.

The duchy of Savoy, ſubject to the King of Sardinia, is commonly divided into ſix parts. 1. Savoy Proper. 2. Geneva. 3. Chablais. 4. Tarantaiſe. 5. Maurienne, and 6. Foſſigny.

The principal cities in this duchy, are, Chamberry, its metropolis; Montmelian, and Aix, in Savoy Proper: Annecy in Geneva: Thonon in Chablais: Mouſtriers in Tarantaiſe: St. John de Maurienne and Bonneville in Foſſigny.

The principality of Piedmont, ſubject to the King of Sardinia, contains Piedmont Proper, Verceil, the principality of Maſſeran, the marquiſate of Ivrea, Aſti, the marquiſates of Suſa and Saluzzo, Vaudois, Nice, Tende, and Auſte.

The chief cities in this principality are, Turin the metropolis, and reſidence of the King of Sardinia, Pignerol, Carignan, in Piedmont Proper; Verceil, Maſſeran, Ivrea, Aſti, Suſa, Saluzzo, Nice, Tende and Auſte, are the chief cities of their reſpective provinces; and Vaudois has for its capital Pragelas, or Cluſon.

The duchy of Montferrat, ſubject to the King of Sardinia, contains the cities of Alby, Caſal, Aqui, and Trino.

The duchy of Milan contains the following territories: Milaneſe Proper, Paviſan, Lodeſan, Cremoneſe, Comaſco, Angeira, Vigevanes, Novares, ſubject to the Queen of Hungary; and Tortoneſe, Alexandrin, and Laumellin, belonging to the King of Sardinia.

The chief cities of this duchy are Milan the metropolis, Pavia, Lodi, Cremona, Como, Angeira, Vigevanes, Novara, Tortona, Alexandria, and Laumelo.

Venice, one of the moſt conſiderable republics in the world, comprehends the following diſtricts: Dodago, or the duchy of Venice; Paduan, Veroneſe, Vicentino, Breſciano, Bergamaſco, Cremaſco, Friuli, part of Iſtria, and Udineſe.

The chief cities belonging to this republic are, Venice the capital, Padua, Verona, Vi-

çenca, Breſcia, Bergamo, Crema, Aquileia, Cabo de Iſtria, and Udina; and on the coaſt of Dalmatia, the towns of Zara, Nona, Spalatto, Sebenico, and Cattara, likewiſe belong to this republic.

The duchy of Mantua, which belongs to the houſe of Auſtria, contains the following cities and territories: Mantua, Sabionetta and Guaſtalla, Bozzolo and Caſtiglione.

In the duchy of Parma, are the territories of Parmeſan and Placentin, Buceto and Valditaro. The chief cities are, Parma, the capital, Placentia, Burgo, St. Domingo, and Valditaro.

The republic of Genoa contains, the principalities of Monaco, and Oneglia, the marquiſate of Final, the territories of Ventimiglia, Noli, Savona, Genoa, Brugneto, St. Remo, Vado, Albenga, Rapallo, Lavigna, and Spizia, in each of which is a city which gives name to its reſpective territory.

The dukedom of Tuſcany contains, Florentine, Sienneſe and Piſan, the principality of Piombino, Maſſa Carara, and Preſidii. The chief towns are Florence, Sienna, Piſa, Leghorn, Piombino, Maſſa, and Orbitello.

The Pope's dominions are Campania of Rome, St. Peter's Patrimony, Ombria or Spoletto, Ancona, Urbino, Romania, Bologneſe

and Ferrareſe. The chief cities are Rome, the capital of all Italy, Tivoli, Freſcatti, Oſtia, Albano, Viterbo, Civita Vecchia, Caſtro, Orvietto, Aquapendente, Spoletto, Narni, Perugia, Ancona, Loretto, Urbino, Peſaro, Ravenna, Bologna, Ferrara and Comachio.

Lucca and St. Marino are very inconſiderable republics.

The kingdom of Naples contains, Abruzzo farther, Abruzzo nigher, Moliſe, Capitinat, Barri, Otranto, Lavoro, Principat farther, Principat hither, Baſilicate, Calabria nigher, and Calabria farther.

The chief cities in the kingdom of Naples are, Aquila, Atri, Compoli, and Civita de Ponna, in Abruzza farther: Chieti, Lanecano, and Solmona, famous for the birth of Ovid: Trivento, Iſernia and Molize, in the county of Molize: Manfredina, Vieſte, Termoli, Civita Mare, Rhodia and Porto Græco, and the towns of Lucera, St. Angelo, and Troja, in Capitinat: Barri and Trani in the province of Barri: Otranto, in the province of Otranto: Naples, the reſidence of the King of the Two Sicilies, Capua and Gaieta, in Lavora: Benevento in the farther Principat: Salerno and Cava, in the hither Principat: Cerenza, Potenza and Molſi, in Baſilicate: Coſenza, in Calabria nigher: Rhegio, St. Severina and Crotona, in farther Calabria.

The

The moſt conſiderable iſlands belonging to Italy are, Sicily, Sardinia, Corſica, Malta, and the Lipari iſlands.

Sicily, ſubject to the King of Naples, is divided into three parts, Val de Mazara, Val de Demona, and Val de Noto, and contains the cities of Palermo, Meſſina, Catania, Syracuſe and Noto.

Sardinia, which is ſubject to the King of Sardinia, is divided into two parts, Cabo de Cagliari, and Cabo de Logodari, and its chief towns are Cagliari, Oriſtagni, Saſſari, and Caſtel Aragoneſe.

In Corſica are the towns of Baſtia and Bonifacio.

The Iſle of Malta belongs to the Knights of St. John of Jeruſalem; Valetta is the capital, and is reckoned one of the ſtrongeſt places in the univerſe.

The principal rivers in Italy are, 1ſt, the Po, which riſes in Piedmond, and running north, paſſes by Turin, then eaſt through Montferrat, the Milaneſe, and the territories of Venice, and falls into the Adriatic ſea by ſeveral channels. 2. The Var, which riſes in the Alps, and running ſouth, falls into the Mediterranean a little below Nice. 3. The Adige, which riſes in Tirol, runs ſouth-eaſt, and falls into the Gulph of Venice near Chioſa. 4. The Arno, which

which riſes in the Appenine mountains, runs weſt through Tuſcany, paſſes by Florence, and falls into the Mediterranean ſea below Piſa. 5. The Tiber, which riſes in the Appenine mountains, runs through Tuſcany and the Pope's territories, and paſſing by Rome, falls into the Mediterranean ſea at Oſtia.

The air of Italy is generally reckoned healthy; the northern parts which lie upon the Alps are cold, and in winter are covered with ſnow: the countries on the north ſide of the Appenine are temperate, and thoſe on the ſouth are very warm. Several parts about the middle, particularly the Campania of Rome, are unhealthful, occaſioned by bogs and ſtagnant waters. In other parts the air is generally pure and dry, owing perhaps to the narrowneſs of the country, ſurrounded on three ſides by the ſea, and continually refreſhed from thence by cooling breezes.

The ſoil of Italy is generally very good and fertile: it is watered by a great number of rivers, affording plenty and variety of fiſh, and contributing many ways to enrich the territories through which they paſs. The chief product of it is corn of all ſorts; grapes of various kinds, of which many ſorts of excellent wines are made; oranges, lemons, citrons, pomegranates, olives and olivettes, whoſe oil is not the meaneſt commodity of the country: in the ſouth parts of Italy are ſugar, almonds, and abundance of mulberry trees, which have

rendered

rendered this country famous for its ſilk manufactures. There are alſo great plenty of all other fruits in their utmoſt perfection, ſuch as figs, peaches, nectarines, apricots, pine apples, cheſnuts, &c; greens, roots, herbs and flowers of all ſorts, and exquiſite in their kind. The gardens of Italy exceed thoſe of all other countries in Europe, or perhaps in the world.

The low lands afford great quantity of good paſturage, on which they breed up vaſt numbers of cattle of all ſorts, for uſe and food, eſpecially of the larger kind. Their buffalos and wild boars are much admired by ſtrangers, and the former of theſe reckoned much ſtronger and better for drawing or plowing than either oxen or horſes. Their foreſts, which are in great abundance, are ſtored with all manner of game; their hilly grounds feed great flocks of ſheep and goats: even the tops of their mountains, though ſeeming condemned by nature to perpetual barrenneſs, abound with laurel and bays, wild olive trees, tamarinds, juniper, and other ever-greens; with oaks, pines, and a great variety of other trees and pleaſant ſhrubs, which give them a perpetual verdure.

The modern Italians are generally very polite and affable, ingenious and witty, and give great application to buſineſs and ſtudy. If they have, in latter times, neglected the ſtudy of war, the more gentle arts, as architecture, painting, and muſic, have aroſe to a much greater height.

In

In Italy are thirty-two archbiſhoprics; Milan, Turin, Tarenteſe, Bolonia, Genoa, Florence, Piſa, Urbino, Fermo, Ravenna, Naples, Capua, Salerno, Amalfi, Sorento, Benevento, Chieti, Lanciano, Manfredina, Barri, Cirenza, Trani, Tarento, Brindiſi, Otranto, Roſſano, Coſenza, St. Severino, Regio, the See of Rome, the patriarchates of Venice and Aquileia. In Sicily are the archbiſhoprics of Palermo, Monte Real and Meſſina. And in Sardinia, Cagliari, Oriſtagni and Saſſari. Beſides theſe archbiſhoprics, there are no leſs than two hundred and ſeventry-three biſhoprics.

There are alſo reckoned ſixteen univerſities: Rome, Venice, Florence, Mantua, Parma, Padua, Verona, Milan, Pavia, Bononia, Ferrara, Piſa, Salerno, Perufia, Sienna, and Naples.

SECT.

SECT. II.

A particular Account of the moſt curious natural Productions of Italy, *in the Animal, Vegetable and Foſſil Kingdoms; of remarkable Mountains, Volcanos and Caverns; of Medicinal and other ſingular Springs; of Cataracts, and other ſtriking Objects of Curioſity.*

ANIMALS.

THE marmotte is an animal peculiar to the mountains of Italy, particularly the Alps, and is a ſpecies of the mouſe kind, whence Pliny calls it *Mus Alpinus*. This is the *Mus* with a long naked tail, and a tawny body. The generic characters are, that the fore teeth are acute; there are no canine teeth; the feet are divided, and the ears are naked. The marmotte is the largeſt of the mouſe kind; it is bigger than a rabbit, though leſs than a hare; the head is large and broad at the baſe, but narrow at the extremity; the mouth is ſmall, the teeth are long and ſharp; the ears are ſhort, and, as it were, cut off; the eyes are large and prominent, and they are very bright and black; the body is corpulent, but the legs are very ſhort; the tail is long and naked, and in form greatly reſembles that of the common rat.

The

BIBLIOTHECA·BODLEIANA

The Golden Eagle.

The head is of a reddiſh brown, or tawny colour, with an admixture of ſomething of the orange; the noſe is blackiſh, and there are ſome black whiſkers about it, like thoſe of the cat; the back is of the ſame tawny or orange brown; and it is covered within the ſkin, by a kind of fatty matter, even when the reſt of the body is ever ſo bare; and this ſeems to have been given it by nature for a defence againſt that intenſe cold, which it is to endure, for a very great part of the year; the teeth are yellow; the legs are well covered with hair, and it is longer and of a paler colour on theſe and on the belly than on the back: the feet are formed ſomewhat like thoſe of the bear, and the toes are armed with very ſharp claws: the creature uſes the hinder legs with great familiarity, and often walks upon them alone. It breeds only on the tops of the mountains, and ſleeps almoſt all the winter, for which period it prepares a warm and comfortable lodging, which it lines with fur and dried vegetables, and ſtores with proviſions. The fat of the marmotte is uſed by the people bordering on the Alps, for burning in their lamps, and is ſometimes uſed in medicine; being recommended in nervous affections, and contractions of the joints.

Among the birds that frequent the Alps, the nobleſt, and moſt worthy of obſervation, is the iron coloured eagle, called alſo the golden eagle. It is frequent in many other parts of Europe, particularly in the foreſts of Germany,

Denmark and Sweden, and builds alſo in the high rocky cliffs of Great Britain and Ireland. This is the ferrugineous falcon, with feathered legs, and the cera yellow; the generic characters of the falcon kind are, that the beak is ſtrong and uncinated; the feet have always three toes before, and one behind, no one of the anterior toes being capable of turning backwards. This is a very large and beautiful, as well as a terrible bird; it is very rapacious and bold, it will ſeize on lambs, and, in the time of its having young, ſcarce any thing is ſafe for it *; the ſize of it is that of a turkey, and the weight not leſs than ten or twelve pounds; the head is large, and the beak remarkably large, and very thick and convex towards the baſe; and at the point, the upper part of it is three quarters of an inch

* Mr. Ray mentions an eagle's neſt, found near the river Derwent in 1668, conſiſting of large ſticks, one end whereof was laid on a rock, and the other on two birch trees. It was two yards ſquare, and had a young eagle in it, with the carcaſſes of one lamb, one hare, and three grygalli. Nor will eagles only ſeize upon lambs, kids, &c. but even children too, if they have an opportunity, as appears from an inſtance given us by Sir Robert Sibbald, of an eagle that took up a young child at a place called Houghton-Head, and carried it to its neſt in Hoy, one of the Orkney iſlands, four miles diſtant; but being immediately followed by four men in a boat, who knew where the neſt was, they brought back the child unhurt. *Prodig. Nat. Hiſt. Scot.* L. III.

longer

longer than the under, and bends over the other; it is of a blackiſh colour, and very firm ſubſtance; its baſe is covered with a yellow cera, or membrane, in which the noſtrils are placed in a very tranſverſe direction; the edges of this upper part of the beak are ſharp, and the tip is blacker than the reſt, which is often rather bluiſh than black; the opening of the mouth is very wide; the tongue, in ſhape, is like that of the human ſpecies; the eyes are very large, and the part of the head immediately over them is prominent, ſo that they ſeem ſunk in a kind of hollow; they are very bright and piercing; the iris is greeniſh, with a caſt of fire colour in it; the pupil is black: nature has taken ſurprizing care to defend them from injuries: for beſides the nictitating membrane, which ſerves other birds in the place of our eye lids, this has four eye-lids, two above and two below, which it cloſes over the eyes at pleaſure; and by means of which, it is able to look in the ſun.

The feathers of the neck are rigid, and of a cheſnut brown; the wings are very large, and extend to a ſurprizing breadth; they are of a brown colour, as is alſo the tail; the whole body is of a duſky ferrugineous brown, with a few ſpots of white; the large feathers of the wings, though extremely long, have that part, which we call the barrel, ſhorter than in the gooſe-quill, but it is very firm and elaſtic, and they make the fineſt pens in the world for writing. The legs are robuſt, and are feathered

down to the toes, with a brown plumage; the feet are yellow, and the claws very long, ſharp, and terrible, and of a bluiſh black; they are equal to the toes themſelves in length, and are very thick at the baſe.

There is a bird peculiar to the Tremiti iſlands in the Adriatic ſea, called the Diomedean bird, from the iſlands, which were known to the antients by the name of the Diomedean iſlands. It is alſo called Cataracta, and is a bird of the web-footed kind, with a ſlender beak, hooked at the end, and with its hinder toe not connected by the membrane that joins the reſt. It is of the ſize of a common hen, but its neck and legs are much longer; its colour is a duſky and ſomewhat greyiſh brown, and under the belly there is more or leſs white; its beak is of a fine red, or in ſome of a yellow colour, with a black end. It is a bird of prey, and has teeth, according to the accounts of the natural hiſtorians of the antients: but another ſingularity as great as that is aſcribed to theſe birds by Pliny, which is, that they had the ſagacity of diſtinguiſhing the Greeks from the Barbarians, who landed on theſe iſlands; that they endeavoured to ſtun the Barbarians with a very hideous noiſe; but welcomed the Greeks in a melodious and friendly kind of ſtrain. He adds, that they go in troops, and have two chiefs, one that leads the van, and the other that brings up the rear.

But

But the moſt ſurprizing animal peculiar to Italy is an inſect, called the tarantula; being a ſpecies of ſpider, diſtinguiſhed by its oval hairy body, and its thick legs; the characters of the genus are as follow: the body is ſhort, and of a roundiſh, oval, or elliptic figure; the eyes are eight in number, and are placed on the hinder part of the thorax; the legs are alſo eight, and the creature has a power of ſpinning.

This is one of the large ſpiders, but is not the very largeſt known: its body is three quarters of an inch long, and of the thickneſs of one's little finger: it is uſually of an olive brown, variegated with a duſkier colour; but in this it varies greatly: it is covered with a ſhort and ſoft down, or hairineſs; the points of its forceps are very fine and ſharp: this ſpecies is a native of Otranto in the kingdom of Naples.

As to the effects of the poiſon they convey into the wound they make, there ſeems yet room for much explanation about it. We are told, that in the ſummer months, eſpecially when the heats are greateſt, as in the dog-days, the tarantula, creeping among the corn in the fields, bites the mowers and paſſengers: that in the winter it lurks in holes, and is ſcarcely ſeen; and that if it bites then, it is not ſo venomous, neither does it induce any ill ſymptoms: but in hot weather, according to Dr. Mead, although the pain of its bite is at

firſt no greater than what is cauſed by the ſting of a bee, yet the part is quickly after diſcoloured with a livid, black, or yellowiſh circle, and raiſed to an inflamed ſwelling; the patient within a few hours is ſeized with a violent ſickneſs, difficulty of breathing, univerſal faintneſs, and ſometimes trembling, with a weakneſs in the head; and on being aſked his ailment, with a tremulous voice, and melancholy look, points to his breaſt, as if the heart was moſt affected: the patient grows by degrees more melancholy, ſtupid, and ſtrangely timorous, and in a ſhort time expires, unleſs muſic is called to his aſſiſtance, which alone, without the help of medicines, is ſaid to perform the cure, the uſual alexipharmics and cordial medicines being of no ſervice: for at the firſt ſound of the muſical inſtrument, although the ſick lie as it were in an apoplectic fit, they begin, by degrees, to move their hands and feet, till at laſt they get up, and fall to dancing, with wonderful vigour at firſt, for three or four hours; then they are put to bed, refreſhed from their ſweating a ſhort time, and repeat their exerciſe, with the ſame vehemence, perceiving no wearineſs or weakneſs from it, but profeſſing that they grow ſtronger and nimbler the more they dance. At this ſport they uſually ſpend twelve hours a day; and it continues three or four days, by which time they are freed from all their ſymptoms; which, nevertheleſs, attack them about the ſame time next year; and if they do not take care to prevent this relapſe by muſic, they fall into the jaundice,

jaundice, want of appetite, univerſal weakneſſes, and ſuch like diſeaſes, which are every year increaſed, if dancing be neglected, till at laſt they prove incurable. As muſic is the common cure, ſo they who are bitten are pleaſed, ſome with one ſort of it, and ſome with another; one is pleaſed with a pipe, another with a timbrel, one with a harp, and another with a fiddle; ſo that the muſicians ſometimes make ſeveral eſſays before they can accommodate their art to the venom: but this is conſtant and certain, notwithſtanding this variety, that they all require the quickeſt and briſkeſt tunes; and are never moved by a ſlow dull harmony. While the tarantati are dancing, they loſe in a manner the uſe of all their ſenſes, are like ſo many drunkards, do many ridiculous and fooliſh tricks, talk and act obſcenely and rudely, take great pleaſure in playing with vine-leaves, with naked ſwords, red cloaths, and the like; and, on the other hand, cannot bear the ſight of any thing black, ſo that if any byſtander happens to appear in that colour, he muſt immediately withdraw, otherwiſe they relapſe into their ſymptoms with as much violence as ever. Baglivi, who reſided in Italy, and probably had good opportunities of informing himſelf with reſpect to this inſect, has written a treatiſe expreſly upon the ſubject: and moſt medicinal writers mention the diſtempers ariſing from the bite thereof, as a thing certain.

But

But, notwithſtanding all theſe great authorities, there is good reaſon to believe the whole ſtory fabulous, and a vulgar error; for it is treated as ſuch by an Italian phyſician, in the Philoſ. Tranſact. and a great many gentlemen of unqueſtionable veracity, who reſided at Taranto many months, and during the time in which the bite of a tarantula is ſaid to be moſt pernicious, affirm, that there was not a phyſician in the country who believed there ever was ſuch a diſtemper, from ſuch a cauſe; that, among the vulgar, there is a tradition, that diſtempers attended with very extraordinary circumſtances had been excited by the bite of a tarantula, but that nobody ever remembers a ſingle inſtance; and that there is no other ſpider to be found in that country, different from thoſe which are common in moſt warm countries.

The locuſt is another inſect, which is a native of Otranto, and appears to be more pernicious to the country than the tarantula; becauſe, at certain ſeaſons, this inſect ſwarms in ſuch prodigious multitudes as would go nigh to devour all the fruits of the earth in this province, had not providence, at the ſame ſeaſon, ſent alſo vaſt flocks of ſome ſort of birds that devour the locuſts. Of thoſe called locuſts, there are reckoned between twenty and thirty different ſorts, which are all ſo many ſpecies of gryllus, the generical characters of which are, that the antennæ are ſetaceous, the exterior wings membranaceous, and much of the appearance

appearance of ſome of the fly kind; the thorax is compreſſed and angulated, and the legs are formed for leaping. The ſorts of locuſts moſt frequent in Europe are the Spaniſh locuſt, and the great green locuſt. The Spaniſh locuſt is the gryllus of a greyiſh brown, with black ſpots on the wings. It is about two inches and an half in length; the exterior wings are beautifully ſpotted with little dots of black; the interior ones are reticulated; the body is compoſed of ſeven or eight joints; the legs are long, and the hinder ones remarkably ſo, and very robuſt; and all of them are reddiſh on the inner ſide, and armed with a double ſeries of ſpines; the eyes are large and are ſtriated with white; this ſpecies is found in Spain, the ſouth of Italy, and the other warmer parts of Europe. The great green locuſt is the gryllus with a ſtraight enſiform tail, and a greeniſh body; this ſpecies is near two inches in length, and about the thickneſs of a man's little finger; the breaſt is covered with a firm armature, of a triangular figure, which is extended down ſideways towards the wings; the female has a kind of ſword at the hinder extremity of the body; it is formed of two parts, or longitudinal valves. This ſpecies is not unfrequent in paſtures in many parts of Europe.

VEGETABLES.

OF the vegetable productions of Italy, there is none more remarkable than a ſort of aſh-tree, growing chiefly in Calabria, in Sicily, from which, in the heat of ſummer, flows a honey like juice, or gum, called manna, which is of great uſe in medicine, being one of the mildeſt and ſofteſt purgatives in nature. There are three kinds of this Calabrian manna; one called Manna di Corpo, which is the fineſt of all, and is ſpontaneouſly diſcharged from the trunk, and large branches of the tree, in form of a cryſtalline liquor, which is hardened into grains of different ſizes, and carefully gathered the ſucceeding day. The ſecond ſpecies of manna, which the Italians call Manna Forzata, or Forzatella, is obtained by making inciſions in the bark of the tree in Auguſt, after the natural diſcharge ceaſes: from theſe inciſions, the manna flows copiouſly, from noon till towards midnight; and is next day expoſed to the ſun, in order to be concreted; but this ſort is leſs eſteemed, on account of its impurity, and yellow colour. The third ſpecies, called Manna di Fronde, iſſues ſpontaneouſly like a kind of ſweat from the nervous parts of the leaves on which the drops are concreted by the heat of the ſun into ſmall granules; but this laſt ſort is not conſtantly gathered, becauſe it cannot be ſeparated from the leaves, without the greateſt difficulty.

culty. The manna is ſometimes in ſmall granules, or drops of an irregular figure, roundiſh, oblong, crooked, and ſometimes contorted. It is ſoluble in water, but not inflammable; and ſhould be choſen whitiſh, and not too heavy, in regular dry granules, or long ſtriæ or flakes, of a pleaſant taſte, and diſſolving wholly in the mouth, not leaving a farinaceous ſubſtance behind it.

The Cork-tree is a native of Italy, and is a ſpecies of quercus, or oak. The bark of this tree, which is the cork, would ſplit and peel off of itſelf, being puſhed up by another bark, formed underneath; but to prevent this effort of nature, and to obtain large and even pieces of cork, it is common to make perpendicular inciſions the whole length of the tree, and circular ones, towards the top and bottom of the trunk; and the bark being thus ſtripped off, is laid in water to render it pliable, and flatted by loading it with heavy weights, after which it is dried, and put up in bales for carriage.

Truffles are a kind of ſubterraneous vegetable production, which grows naturally in Italy, and larger there than in any other part of Europe. The truffle is not unlike the muſhroom; it grows under the ſurface of the earth, and is a genus of fungi, which is an order of vegetables extremely different from all others. The fungi have, indeed, ſo little of the common and general appearance of vegetables,

getables, that many have denied them to be ſuch, and contended for their being only excrementitious matter, protruded from decaying vegetables of other kinds. But notwithſtanding the fungi have neither the colour or texture of other plants, nor leaves nor flowers like them; yet they muſt be allowed to belong to the vegetable kingdom, as having abſolute and perfect ſeeds, conſiſting uſually of ſingle antheræ, which produce plants like thoſe from which they are collected.

The fungi are extremely different in figure, and in their manner and place of growth; ſome growing on the ground, ſome on living trees, and many on decayed wood; and that horizontally, or erect. Some are of only a few days duration, and others remain for years, and ſome there are which grow under the ſurface of the earth, in no particular direction.

The truffle is only a fleſhy tubercle, covered with a hard ſort of cruſt, rough, and ſomewhat regularly furrowed on the ſurface, almoſt like the cypreſs nut. It does not riſe above the ſurface of the earth, but lies concealed above half a foot below it. Great numbers of them are found in the ſame place, of different ſizes: ſome of them are now and then found of a pound weight, or even a pound and a quarter; theſe laſt are but rare, and Pliny only mentions their being of a pound weight.

They

They grow at the feet and under the ſhades of trees, ſometimes about the roots of ſtones, and ſometimes in clear earth. Their favourite trees are either the white or green oak, as the elm is that of the morellæ. They begin to be found when warm weather firſt ſucceeds the cold, ſooner or later, as the ſeaſon is more or leſs mild; for they have ſometimes been very rare after hard winters. At firſt, they appear only like little round peas, red without, and white within. Theſe peas grow larger by degrees; from that time they take out of the ground what they commonly call white truffles; theſe are of themſelves inſipid, and people dry them as an ingredient for ragouts, becauſe they keep better when dried, than marbled ones do. It is a common opinion, that truffles which have been once removed from their places, are never after capable of being nouriſhed, even when put in ſome earth from which they were originally taken; but if one leave them there for a certain ſeaſon, without diſturbing them, they grow inſenſibly larger, their bark becomes black, rough, and unequal, though they always retain their whiteneſs within. Hitherto they have very little ſmell or taſte, and can only be uſed in ragouts: theſe are always called the firſt white truffles, and are not to be made a different ſpecies from the marbled or black ones gathered in the end of autumn, and even in the winter, after the froſts are begun.

When the truffles are at maturity, they have a very good ſmell and taſte; and are fit to be dug from the month of October, to the end of December; and ſometimes to the end of February and March, when they are even at that time marbled: whereas thoſe gathered from the month of April, till July and Auguſt, are only white. If people neglect to gather the truffles when arrived at a due degree of maturity, they rot; and then we may obſerve the re-production of the truffle; becauſe, after ſome time, we ſee ſeveral bunches of other young truffles filling up the places of the rotten ones. Theſe young truffles are nouriſhed till the firſt colds come on; and if the froſts are not intenſe, they get over the winter, and furniſh us betimes with the freſh green truffles.

As to the virtues of truffles, the common opinion is, that they are hot: Galen, however, according to Matthiolus, looks upon them as indifferent, and the baſis of all other ſeaſoning; and, indeed, it is to this purpoſe, that they are uſed in all ragouts. Avicenna ſpeaks of them in a manner quite different, and ſays, they engender thick humours more than any other food; that they are hard of digeſtion, heavy on the ſtomach, and, when much uſed, have a tendency to bring on an apoplexy and palſy. Theſe two authors may be reconciled, if we conſider two qualities in the truffle, which are capable of producing two different effects: firſt, they may prove hot of themſelves, by emitting their volatile ſalts into

into the ſtomach; or by being mixed with ſalt, pepper, and other ſpices, which they drink up like a ſponge. In the ſecond place, they may prove of hard digeſtion, when eaten immoderately by a perſon of a weak ſtomach: in which caſe they produce bad effects, ſtagnate, and form themſelves into a glareous ſubſtance, which diſorders the ſtomach, and which may be occaſioned by the cold quality aſcribed to them by Galen.

FOSSILS.

IN ſeveral parts of Italy, and ſome of the neighbouring iſlands, is found the *Lapis Aſbeſtos*, or *Amiantus* *, called here Earth-flax or Salamander's-wool, which is a ſort of fiſſile ſtone, or mineral ſubſtance, of a whitiſh colour and woolly texture, conſiſting of ſmall filaments, and endued with the wonderful property of reſiſting fire, and remaining unconſumed in the intenſeſt heat. The induſtry of mankind has found out a method of working this fibrous mineral, and employing it in divers manufactures, chiefly cloth and paper: though one would ſcarce imagine the thing practicable without the mixture of ſome other pliant matter, as wool, hemp, or flax, the threads of the Aſbeſtos appearing too brittle for ſuch uſes. The cloth made of this incombuſtible matter, was in great eſteem amongſt the an-

* This ſtone is not peculiar to Italy, or the Mediterranean iſlands, but is found in India, Tartary, Siberia, Egypt, and Greece; likewiſe in France, the Netherlands, the iſle of Angleſey in Wales, in Scotland, in Cornwall, and many other parts of the world. Mr. Lloyd had ſome paper made of that found in the Iſle of Angleſey, which proved coarſe and apt to tear; but being the firſt attempt, there was great reaſon to think it might be much improved: and yarn was made of that which Mr. Wilſon diſcovered in Scotland. See *Philoſoph. Tranſact.* N° 166.

cients,

cients, though better known and more common than in the preſent times. Pliny ſays, he himſelf had ſeen napkins of it, which being taken foul from the table, and thrown into the fire, were by that means cleanſed as if they had been waſhed in water: but the principal uſe of it, according to the ſame author, was to make ſhrouds to wrap up the corps of kings and princes, that ſo their aſhes might be preſerved diſtinct from thoſe of the fuel, which compoſed the funeral-pile; and it is ſaid the Tartars ſtill make uſe of it in burning their dead.

As to the manner of managing the Aſbeſtos, and of ſpinning and weaving it, &c. the accounts we have are various. Signor Caſtagnata, ſuperintendant of ſome mines in Italy, found in one of them a great quantity of this lanuginous mineral, and had the ſkill of preparing it in ſuch a manner as to reſemble a fine lamb-ſkin dreſſed white; and he could thicken or thin it to what degree he pleaſed, ſo as to become either like a very white ſkin, or a very white paper; both which would reſiſt the moſt violent fire, as he often experienced. Signor Ciampini gives us the method of ſpinning the Aſbeſtos, and making it into cloth, which he thus effected. He firſt laid the ſtone to ſoak for ſome time in warm water, then opened and divided it with his hands, that the earthy parts might fall out, which are whitiſh like chalk, and ſerve to bind the fibrous parts together. This operation he repeated ſix or ſeven times with freſh

water, ſtill opening and ſqueezing the mineral till all the heterogeneous parts were waſhed out, and then the flax-like parts were laid in a ſieve to dry. One method of ſpinning the Aſbeſtos thus cleanſed, is to card it gently, and then lay it between the cards, ſo that ſome of it may hang out of the ſides. Having faſtened the cards on a table or bench, take a ſmall reel, made with a little hook at the end, and a part by which it may be eaſily turned round. This reel is to be wound over with white thread, and a ſmall veſſel muſt be in readineſs with which the fore-finger and thumb are conſtantly to be kept moiſt, both to preſerve the ſkin, and to render the filaments of the ſtone more ſoft and pliant; and ſo by twiſting about the thread upon the reel with the Aſbeſtos hanging out of the cards, ſome of the latter will be worked up with it; and this thread may, with care, be woven into a coarſe ſort of cloth, which being put into the fire, the thread and oil will be conſumed, and the incombuſtible cloth remain. But this method being very tedious, inſtead of the thread it is better to put ſome flax on a diſtaff, and by taking three or four filaments of the ſtone, and mixing them with the flax, they may be eaſily twiſted together, and the thread thus made will be more ſtrong and durable; ſo that carding is unneceſſary, and rather breaks the filaments than does any ſervice.

In waſhing the ſtone, the ſame gentleman obſerves, there will remain ſeveral ſhort pieces

at

at the bottom of the water, of which paper may be made after the common method. He adds, that the beſt way to preſerve the cloth, or any thing made of this mineral, which by reaſon of its dryneſs, is very apt to break and waſte, is to keep it well oiled; and when the cloth is put in the fire, the oil burns off, and the cloth comes out white and purified *.

The pumice ſtone, is frequent in Italy and Sicily, being thrown up by the eruptions of Veſuvius and Ætna. Naturaliſts indeed are not well agreed about the nature and origin of pumice, ſome taking it to be pieces of rock half-burnt and calcined, and caſt into the ſea by volcanos, where being waſhed by the ſalt water, it acquires a whitiſh or greyiſh colour. Others will have it to riſe from the bottom of the ſea, whence they ſuppoſe it detached by ſubterranean fires; and hence they account for its ſaline taſte, its lightneſs, and poroſity. In confirmation hereof they alſo alledge, that theſe ſtones are frequently found in parts of the ſea, far remote from volcanos; and add,

* It is a common opinion, that the aſbeſtos loſes nothing of its weight in the fire; and this ſeems to be confirmed by what S. Ciampini tells us, that he kept it for three weeks in a glaſs-houſe-fire, and found it unaltered. But in two trials before the Royal Society, a piece of cloth made of this ſtone, a foot long, and half a foot broad, loſt each time above a dram of its weight. It is remarkable, that when taken out red-hot, it did not burn a piece of white paper, on which it was laid.

that

that ſeveral parts of the Archipelago are ſometimes covered with them all on a ſudden, after a few inward ſhakes and heavings of the bottom *. The pumice is of ſome uſe in medicine, but much more in the arts and manufactures.

In ſeveral of the mountains of Savoy, is dug a ſpecies of cryſtal, which they diſcover by ſome veins that appear on the ſurface, and are commonly of a whitiſh and bluiſh colour. They break the rock, and find the cryſtal in cavities, perhaps ſeveral feet deep, which they call ovens. It is tranſparent, reſembling a diamond, but much inferior to it in hardneſs and luſtre. The ſhoots of it are of different lengths and bigneſs, but all of them hexagonal, and terminating in a point, the other end adhering to a ſort of irregular ſtone, which is ſtiled the matrix of the cryſtal. The rocks ſometimes fall into the frozen vallies, where people find the cryſtal on the ſurface of the ice.

* Mr. Dove gives us an account, in the Philoſophical Tranſactions, of a ſurprizing ſhoal of pumice-ſtones which he ſaw floating in the Ethiopic ocean, from the 22d to the 26th of March, during which time his ſhip ſailed above three hundred miles; and when he firſt diſcovered theſe ſtones, whereof ſome were as big as a man's head, he reckons they were 186 leagues from the neareſt land.

In the Alps and Appenines, they likewiſe dig up Talc; being a ſort of ſhining ſtone, eaſily diviſible into thin tranſparent ſcales or leaves, a little flexible. Some talc is of a ſilver-colour, and ſome yellow; but that we have from Venice is reckoned the beſt, which is brought to us in large greeniſh ſtones, but when wrought, becomes white and exceedingly pellucid *.

There is found in the neighbourhood of Bologna, a grey, gloſſy, ponderous ſtone, about the ſize of a large walnut, which being properly prepared and calcined, makes a ſpecies of phoſphorus. This was accidently diſcovered by one Caſciarlo, a chymiſt, who, having gathered ſome of theſe ſtones, and carried them home, in hopes of extracting ſilver out of them by fire, found that after a certain proceſs, being expoſed to the light, they retained it in ſuch a manner, as to ſhine in the dark for a conſiderable time. Some affirm, that the true art of preparing and calcining this ſtone is loſt; and we are told of a

* The Talc brought from Muſcovy, is reddiſh when in the ſtone, but it ſeldom comes to us otherwiſe than in leaves, which are hard, ſmooth, gloſſy, and very tranſparent, whence it is called Muſcovy-glaſs, and is uſed for lanterns, to cover paintings, &c. The *lapis ſpecularis* of Pliny is a ſpecies of talc, which he obſerves the Romans uſed for window-lights, as they do now in ſome countries where it is found.

perſon

perſon who had a method of making ſtatues and pictures of it, that would appear luminous in the dark, but that he died without diſcovering the ſecret *.

With regard to extraneous foſſils, there is in the cabinet of curioſities at Leghorn, a piece of the jaw-bone of an elephant, petrified into an agate; and in the neighbourhood of Todi, in the duchy of Spoleto, is found a ſort of foſſil wood, which is veined ſomewhat in the manner of marbled paper, but it is in all other reſpects, like common wood: it is dug up in blocks of different dimenſions, without any appearance of root or branches, and is manu-

* It is to be obſerved, that the Bononian ſtone, though it reſembles a burning coal, never emits any heat; but the effects of the burning phoſphorus, which is a chymical preparation made of ſand and urine, are very ſurprizing. With a piece of ſolid phoſphorus one may write on paper, plaiſter, &c. and the letters in the dark will appear like flame, but when a candle is brought in, the ſhining diſappears. A bit of it rubbed between two papers, takes fire inſtantaneouſly; but if a perſon is not careful in the management of it, he is in danger of burning his fingers; and it penetrates deeper into the fleſh than common fire. M. Caſſini happening to preſs a piece in a cloth between his fingers, the cloth took fire; he endeavoured to extinguiſh it with his foot, but his ſhoe caught the flame, and he was forced to put it out with a braſs-ruler, which ſhot forth rays in the dark for

manufactured by the people of the country into different ſorts of utenſils.

for two months after. This ſort of phoſphorus muſt be kept in a vial full of water. It diſſolves in all ſorts of diſtilled oils, and in that ſtate is called liquid phoſphorus; or it may be ground with pomatum into a luminous unguent.

MOUN-

MOUNTAINS.

THE Alps, which ſeparate Italy from France and Germany, are the higheſt mountains in Europe; they extend, from near the coaſt of the Mediterranean, between the territory of Genoa and the county of Nice, to the gulph of Carnero, which is part of the gulph of Venice. Theſe mountains give riſe to the Rhine, the Rhone, and many other conſiderable rivers, ſome of which, before they enter into the plains, fall down ſteep rocks, with incredible violence and noiſe. The river Arva in Savoy, is remarkable on this account; and the roads near it, which are cut along the ſides of vaſt precipices, and in ſeveral places very narrow, afford a ſcene that few travellers can behold without ſome degree of terror. But though the proſpect of this ſtupendous pile of rugged mountains, inacceſſible rocks, and wide chaſms, by which they are interſected, ſeems to carry the face of ruin and confuſion, yet there is ſomething in the whole that is auguſt and ſtately, that fills the mind with noble thoughts, and naturally leads us to reflect on the power, wiſdom, and majeſty of the great Creator.*

M. de la Condamine obſerves, that the melting of the ſnows in ſummer, being ſuſpended every night in the gorges of the Alps, and renewed again every day, during the hours

* See Vol. IV. p. 185. & *ſeq.* in the Notes.

in

in which the ſun is hotteſt, gives occaſion to very fantaſtical appearances. A valley, in whoſe depth the eye is loſt, covered with rough pieces of ice, reſembling waves, and the whole ſurface of this ſea again congealed, and interſected here and there with deep crevices; the noiſe of a ſubterranean torrent, which ſupports this enormous maſs, and changes the appearance as well as level of it from day to day; all theſe effects, wrought by changes that are almoſt ſudden, and variouſly combined of heat and cold, can ſcarce be ſeen any where in ſo eminent a degree; they form together a very ſingular ſpectacle, worthy the obſervations of Naturaliſts; and calculated to furniſh new obſervations.

Scheuchzer, in his *Iter Alpinum*, gives a deſcription of the Ice vallies of Switzerland, which is the name beſtowed on thoſe immenſe maſſes of ice: but it appears, that the ice vallies of Savoy are very different from them. The moſt celebrated and moſt curious of theſe laſt, is at three days journey from Geneva, at the foot of the White Mountain, the higheſt among the Alps. This is called the valley of Chamogny, from a little village of the ſame name, on the north ſide of the Ava, on the ſouth ſide of which is the Ice valley. Though theſe are called vallies, as being vaſt cavities or hollows, their ſituation is perhaps two or three thouſand feet perpendicular above the level of the plains below; and yet having points of rocks or mountains ſhooting up to a prodigious

height above them. The aſcent is generally very ſteep, rugged and ſlippery, and the air ſo extremely cold, that perſons who viſit them in July and Auguſt, the only months in the year that it is fit for the journey, go cloathed as in the depth of winter.

The valley of Chamogny, which ſtretches itſelf eighteen miles in length, is divided, at about half that diſtance from the village, into two different horns, or branches. The ſurface of this valley is very uneven, appearing like a ſea or lake that has been agitated by violent winds and frozen all at once, whilſt the waves were rolling and daſhing one againſt another; and in ſeveral places there are great cracks in the ice, ſome narrow enough to ſtep over, but others ſome yards wide, in which people are often loſt who go in ſearch of cryſtal, for it is very dangerous going over them, eſpecially when covered with ſnow. Theſe cracks are made by the heat of the ſun at noon, and with ſuch a terrible noiſe, occaſioned by the echo from the rocks all round it, that it reſembles the firing of great guns, or loud claps of thunder. The breadth of this valley is about two miles, and the thickneſs of the ice in ſummer is found to be ſix or eight feet, but ſome of the frozen waves, if we may ſo call them, are forty or fifty feet higher than the cavities between them. According to Mr. Martel, who viſited this valley in 1742, it has a communication with another valley by five openings, at one of which the river Arbairon has its ſource, iſſuing

iſſuing from under two arches of ice, compoſed of a vaſt number of vertical ſhoots unequally terminated, which look like the fineſt cryſtal in the world, and reflect an infinity of the brighteſt colours. The Arbairon is a large ſtream that falls into the Arva, and carries along with it a great many particles of gold; and the rivulet of Argentiere, which comes from a valley of ice of the ſame name, carries with it alſo pieces of gold and ſilver.

The ſnow-balls, which ſometimes gather, and roll down the ſides of theſe mountains, are very ſurprizing and dangerous to travellers. They are occaſioned by the dropping of a quantity of ſnow from ſome prominent rock, which increaſes as it falls down the ſteep declivities, till it becomes of a prodigious ſize, and ſweeps away houſes, trees, men, horſes, or whatever it meets with in its paſſage. As they fall ſuddenly, and with great rapidity, it is very difficult for paſſengers to avoid them; and nothing is able to reſiſt their force till they get to the bottom, where they generally break in pieces by the violence of the ſhock. Some of theſe mountain ſnow-balls have been found, by meaſuring their track, to be above a hundred yards in diameter; and one of them, in the year 1695, fell upon a village in the night-time, and deſtroyed eleven houſes, beſides barns and ſtables, burying men, women, and cattle in the ruins. Theſe terrible accidents, we are told, are produced even by the leaping of a Chamois, the firing of a piſtol, a ſhout,

the bells of mules and pack-horſes, or any noiſe that ſhakes the air, whereby the ſnow is looſened from the rocks above: for which reaſon, in places of the greateſt danger, people take care to travel early, and with all the ſilence poſſible. Some of theſe ſnow-balls indeed are not ſo deſtructive, which conſiſt of new-fallen ſnow driven by the wind; for theſe being lighter, perſons buried under them may live a long time without being ſuffocated, and are often timely relieved by men kept in pay to clear the roads, and give aſſiſtance to paſſengers on ſuch occaſions.

The Appenines are another chain of lofty mountains, which run through the whole length of Italy, from the north-weſt to the ſouth-eaſt; and from which proceed the ſeveral rivers and brooks that water and fertilize this country.

Beſides the Alps and Appenines, Italy is celebrated for two Volcanos, mount Veſuvius near Naples, and mount Ætna, near Catania, in Sicily.

Mount Veſuvius, which is one of the moſt famous and dreadful Volcanos in the world, is about ſeven or eight miles to the eaſtward of Naples; and the terrible eruptions of fire, ſtones, and melted matter, that have proceeded from its ſummit, have often threatened the deſtruction of that city, and all the neighbouring country. About half the way from Naples to mount

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mount Veſuvius is pleaſant enough, running thro' ſeveral pretty villages, along the coaſt; after which the traveller meets with diſmal marks of this volcano's fury. The aſcent to the top of the mountain is tedious and difficult; becauſe every ſtep the traveller takes, he ſinks into a kind of burnt earth, looſe and crumbled, as if it had been ſifted and mixed with calcined ſtones and cinders. After travelling two miles in this troubleſome manner, the traveller arrives at a naked plain, from ſeveral parts of which iſſues a ſulphureous ſmoke; and in the middle of it riſes another hill, ſhaped like a ſugar loaf, of more difficult acceſs than the former. At the ſummit of the hill is a vaſt mouth, or cavity, about four hundred yards in diameter at the top, but ſhelving down on all ſides like a funnel, from whence proceeds a continual ſmoke, and ſometimes thoſe aſtoniſhing eruptions of flame, aſhes, and burning matter, which fill the neighbouring inhabitants with conſternation: but this volcano has, within theſe few years, opened to itſelf a new crater or mouth.

In the year 1755, M. de la Condamine proceeded to the brink of the funnel, which had formed itſelf round the mouth of the volcano ſince its laſt exploſion. This funnel was opened amidſt a heap of cinders, calcined ſtones, and ſulphur, which ſtill burned here and there, tinging the very ſun with its colour, and exhaling through divers crevices. This gentleman, going cloſe to the edge of

the crater, in order to examine the inside of this gulph, was prevented from seeing the bottom by the smoke. At such times, however, as the wind dispersed it, he could see down to the depth of forty fathoms, or more; and could perceive therein a large arched cavity, towards the north-east part of the mountain. Having caused several great stones to be thrown into this cavity, he could hear the noise of their rolling for twelve seconds, and when nothing was thrown in, he could hear a kind of boiling, like the sound of agitated waves.

The eruptions of this volcano have been frequent for many years past; and every time that it darts forth its flames, and vomits out its liquid matter, the exterior form of the mountain, as well as its height, receive considerable alterations. In a small plain, resembling a half moon, situated between the mountain of cinders and a semicircular theatre of steep rocks, two hundred feet high, M. de la Condamine viewed closely the breathing holes, lately opened in the sides of the mountain, through which, at the time of its last eruption, those torrents of inflamed matter had escaped, to which they give the name of lava, and with which all this valley is filled.

This singular spectacle presents us with the appearance of metallic waves grown cold, and in a state of congelation. One may form a slight but very imperfect notion of it, by sup-

poſing to ourſelves a ſea of thick and tenacious matter, the waves of which were beginning to ſubſide. This ſea had its iſles, which are ſolitary maſſes, reſembling hollow ſpungy rocks, opening into arcades and grotto's, fantaſtically formed, beneath which the burning liquid matter has opened itſelf magazines or reſervoirs not unlike furnaces. Theſe grottos, with their vaults and pillars, all the pure work of nature, were loaded with Scoria, ſuſpended around them, in the form of Stalactites, or irregular cluſters of grapes of all ſorts of colours and ſhades.

They do not comprehend under the name of lava, all the various ſorts of matter which iſſue out of the mouth of the volcano, ſuch as cinders, pumice ſtones, ſand, gravel, &c. but only thoſe which, being reduced by the action of the fire to a ſtate of liquidity, form, on cooling, ſolid maſſes, in hardneſs ſurpaſſing even that of marble. Tables, chimny-pieces, and even ſnuff-boxes are made of it. It is diffuſed in large maſſes on the ſides of mount Veſuvius, and in the adjacent fields. There it has run in torrents, and formed, on cooling, maſſes like rocks. Frequently in the interval between one eruption and another, a new bed of earth is formed over the lava, extremely fertile, which another ſtratum of lava covers again in its turn. It is beneath ſeveral of theſe beds of lava, cinders, and earth, all which, put together, form a cruſt between ſixty and eighty feet thick, that they have found temples,

ples, portico's, ſtatues, a theatre, and an entire city; and it is well known that Naples is paved with this lava; the pavement of Rome is alſo compoſed of the ſame materials, and the greater part of the antient Roman highways.

Though we meet with diſmal accounts in antient hiſtory of the devaſtations occaſioned by the eruptions of this volcano, there are irreſiſtible teſtimonies of vaſt conflagrations, anterior to all hiſtorical monuments. The firſt eruption of mount Veſuvius, which we find mentioned in hiſtory, was towards the end of the year 79 of the Chriſtian æra, and the firſt year of the reign of the Emperor Titus, when Campania was alarmed with a moſt dreadful, if not an incredible eruption of that volcano, which had laid waſte the whole country to a great diſtance, and utterly conſumed a great many cities, with their inhabitants; and among the reſt, Pompeii and Herculaneum. Pompeii had ſuffered much by an earthquake about three years before, and had been rebuilt, and embelliſhed with ſeveral ſtately edifices, eſpecially a theatre, in which the people were aſſembled, and intent upon the public ſhews, when the city was ſwallowed up by an Earthquake, which attended the eruption of the flames from the mountain. The ruins of Herculaneum, were diſcovered only a few years ago, being buried ſixty feet deep under the aſhes, cinders, and other matter vomited out upon it by the mount; and the ſurface of this matter, wherein it was overwhelmed for ſuch a long ſucceſſion

ceſſion of time, became arable and cultivated ground. The cities of Puteoli and Cumæ were greatly damaged by the ſame earthquake, and by the burning aſhes, which, if the hiſtorians of that time are to be credited, reached Africa, Egypt, and Syria, and at Rome turned ſuddenly, to the great terror of the inhabitants, day into night, Pliny the elder, who was then at Miſenum, where he commanded a Roman fleet riding there, having diſcovered this cloud on the firſt of November, and not yet knowing whence it iſſued, went directly on board one of the galleys, and ſailed towards mount Veſuvius. He was ſoon met by great numbers of perſons, who, in ſmall boats, were flying from the dreadful conflagration. But nevertheleſs, prompted by his curioſity, he purſued his courſe, though ſtones, aſhes, and earth, began already to ſhower down upon his veſſel; nay, we are told, that to his great ſurpriſe, he found a new Cape formed by the earth, and huge ſtones thrown out by the mountain. However he proceeded with great intrepidity, and reaching Stabiæ, between Pompeii and Surentum, though the inhabitants had all abandoned the place, paſſed the night there, the better to obſerve, during the darkneſs, the mountain, which ſeemed all on a blaze. The ſame night a dreadful earthquake happened at Stabiæ, and ſuch a huge quantity of ſtones fell, that Pliny reſolved to put to ſea, but was prevented by contrary winds. At length the fire approaching, he attempted to ſave himſelf by flight; but though

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ſupported by two of his domeſtics, he ſoon fell ſuffocated, as is ſuppoſed, by the thickneſs of the air, and the inſupportable ſtench of the ſulphur; his body was found three days after, and interred by his nephew, Pliny the younger, who was then at Miſenum, and narrowly eſcaped the ſame fate, as he himſelf relates in his epiſtles. On this occaſion, the great poet Ceſius Baſſus was conſumed, with his houſe, by the flames; and likewiſe Agrippa, the ſon of Claudius Felix, formerly governor of Judea; and of Druſilla, daughter of Agrippa, the laſt King of the Jews.

But to come nearer our own times, there was an eruption of mount Veſuvius in 1632, ſo very violent, that it threw rocks three miles into the air, which eruption was attended with a terrible earthquake.

In 1694, there was a violent eruption of this volcano, which continued great part of the month of April, and threw up aſhes and ſtones with ſuch violence, that ſome of the ſtones reached Benevento, near thirty miles diſtant. A prodigious quantity of lava, or melted minerals, was likewiſe thrown out at the mouth of the mountain, and ran down by its ſides, inſomuch that great numbers of men were employed to cut trenches and channels to receive it, and prevent its ſpreading over the plains below. At this time, when the wind was in the eaſt, the houſes and ſtreets of Naples were covered with aſhes.

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The latter end of July, in the year 1707, there happened another terrible eruption, attended with ſuch a rumbling and bellowing of the mountain, as far exceeded the report of the largeſt artillery. Having thrown up clouds of aſhes into the air for ſeveral days and nights, and a ſhower of ſtones that killed both men and cattle, it began to belch out a liquid torrent of bitumen, which reſembled a gentle ſtream of fire, and cooling in its progreſs, became as hard as flint at the bottom, but more porous and ſpongy on the ſurface. After this, frequent flaſhes of fire, like lightning, proceeded from its mouth, followed by loud claps of thunder; and on the ſecond of Auguſt, at four in the afternoon, there was ſuch a thick cloud of aſhes hovering over Naples, that the darkneſs was equal to that at midnight. The next day, by the ſhifting of the wind, the aſhes were driven another way; and the mountain having raged after this manner about fifteen days, the eruption entirely ceaſed.

To theſe accounts of Veſuvius, we ſhall only add a few particulars relating to the great eruption in 1717, as they are given us by Mr. Edward Berkeley, who was then at Naples. On the 5th of June, he tells us, the mountain was obſerved to ſpue a little out of the crater, as he calls its mouth; and the ſame continued the day following. The 7th in the evening it began a hideous bellowing, which continued till noon the next day, cauſing the windows and

and even the houſes in Naples to ſhake. From that time it would vomit vaſt quantities of melted matter to the ſouth, which ſtreamed down the ſide of the mountain, like a pot boiling over. On the 10th it roared and groaned moſt dreadfully, of which one cannot form a juſter idea than by imagining a mixed ſound made up of the raging of a tempeſt, the murmur of a troubled ſea, and the roaring of thunder and artillery confuſed all together. This induced our author, with three or four more in company, to viſit the mountain; and they arrived at the burning river about midnight, when the roaring of the volcano was exceeding loud and horrible. There was a mixture of colours in the cloud over the crater, a ruddy diſmal light in the air over the fiery torrent, and aſhes were continually ſhowering upon their heads; all which circumſtances, augmented by the horror and ſilence of the night, made a moſt uncommon and aſtoniſhing ſcene. Imagine, ſays he, a vaſt torrent of liquid fire rolling along the ſide of a mountain, and with incredible fury bearing down and conſuming vines, olives, fig-trees, houſes, and every thing that ſtood in its way. The largeſt ſtream ſeemed half a mile broad at leaſt, and five miles long; and Mr. Berkeley walked ſo far up the mountain by the ſide of this burning river, that he was obliged to retire in haſte, the ſulphureous ſteam having ſurprized him, and almoſt taken away his breath. They returned about three in the morning, hearing conſtantly the murmur and groaning of the mountain, which

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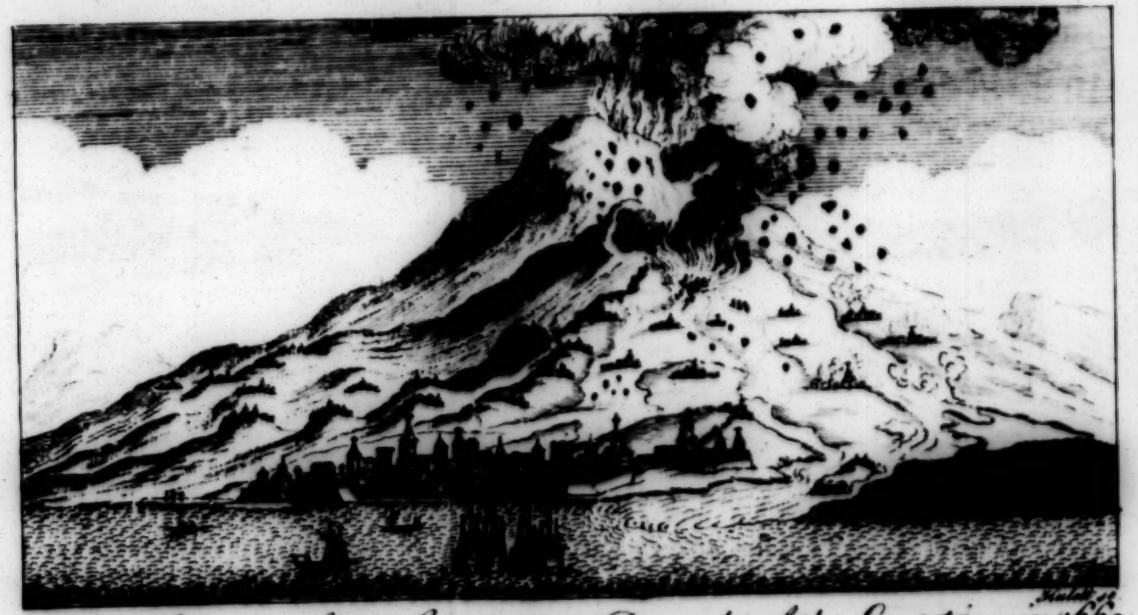


Mount Etna in Sicily, being a true Draught of the Eruption in 1669.

which now and then burſt into louder peals throwing up huge ſpouts of fire and burning ſtones, which in their fall reſembled the ſtars in our rockets. Sometimes there appeared two or three diſtinct columns of flame, and ſometimes only a ſingle one that ſeemed to fill the whole crater. It was judged that the flames and fiery ſtones were ſhot more than a thouſand feet perpendicular above the ſummit of the volcano, which continued raging in this manner, more or leſs, till the 18th, when the whole appearance ended, and the mountain remained perfectly quiet.*

Mount Ætna, called alſo mount Gibel, the higheſt mountain in Sicily, is ſituated in the Val

* It is obſerved that the eruptions of theſe mountains are of two ſorts, the one not ſo violent as very much to diſturb the adjacent country; and this happens once in two or three months, and laſts three or four days; the other is more furious and of a longer continuance, and is obſerved at Naples to happen to Mount Veſuvius, once in about eighty years: but from the burning or not burning of this mount, Naples concludes on its ſafety or danger from earthquakes: for doubtleſs the matter is continually burning under the mountain, and thoſe vaſt clouds of ſmoke, which daily iſſue out of the top, if the cavity happens by any rock, or inward alteration, to be ſtopped, muſt deviate through other paſſages under ground, heaping up there a continual magazine for a future calamity.

Val di Demona, ten miles weſt of Catania. This is the principal volcano in Europe, and has been famous in all hiſtories for its fiery eruptions. The firſt eruption of mount Ætna we have any account of, happened 500 years before the deſtruction of Troy, according to Diodorus Siculus. The greateſt eruptions of late happened in the years of the Chriſtian æra, 1536, 1554 and 1579; and thoſe eruptions have always been taken for the moſt probable cauſes of the horrible ſhocks that from time to time, have laid waſte the iſland of Sicily.*

Upon the 11th of March 1669, a furious eruption of mount Ætna, broke out two hours before

It is alſo obſerved, that in earthquakes occaſioned by theſe eruptions, the motion of the earth is not from the perpendicular, but horizontal, as appears by the cracks in the earth all over Sicily: it is a vibration ſo quick that it cracks the glaſs in the windows, and the reciprocations of a lute-ſtring, are not more frequent than it. Now when the vibrations are ſo quick, and the body moved ſo large, the motion muſt be prodigiouſly violent.

* Earthquakes are certainly the moſt formidable phænomena in nature; but with reſpect to their cauſes naturaliſts are divided, ſome aſcribing them to water, others to fire, and others to air; and all of them with ſome reaſon, though fire ſeems to be the chief, for thoſe countries which have the greateſt ſtore of ſulphur and other inflammable matters are moſt ſubject to earthquakes. Dr. Liſter is of opinion, that the material cauſe of thunder, lightning,

before night, at the ſide of the mountain, about twenty miles from the old mouth, the noiſe of which was heard a hundred miles off, to which diſtance the aſhes were likewiſe carried. The matter thrown out was a ſtream of metal and minerals, rendered liquid by the fierceneſs of the fire, which boiled up at the mouth like water at the head of a great river; and having run

ning, and earthquakes, is one and the ſame, viz. the inflammable breath of the Pyrites, which is a ſubſtantial ſulphur, and takes fire of itſelf. Dr. Woodward, who aſcribes earthquakes to the ſubterraneous heat or fire rarefying and ſwelling the waters of the abyſs till it can find a vent, obſerves, that the effects of theſe commotions are not very remarkable except in countries that are mountainous, and conſequently ſtony and cavernous underneath, ſince the fire naturally tends to thoſe caverns where it meets with the readieſt reception, and the ſtrata of ſtone or marble making great oppoſition, the ſhocks are more violent and the effects more terrible, than when they happen amongſt gravel, ſand, or ſuch looſe matter as makes little reſiſtance. Hence it is, that Italy, Sicily, &c. are ſo often alarmed and harraſſed with earthquakes, thoſe countries being mountainous and cavernous, abounding with ſtone and marble, and affording ſulphur and nitre in great plenty.

The ſame ingenious Author adds, that Ætna, Veſuvius, and other volcanos, are only ſo many ſpiracles, ſerving to diſcharge the ſubterraneous fire when preternaturally aſſembled; and that if this fire can come at theſe ſpiracles without any obſtruction, it eaſily paſſes out from time to time without ſhaking or diſturbing the earth; but when

run a little way. the extremity thereof began to cruſt and curdle, turning into hard porous ſtones reſembling large cakes of burning ſea-coal. Theſe came rolling and tumbling one over another, bearing down any common building by their weight, and burning whatever was combuſtible. At firſt the progreſs of this inundation was at the rate of three miles in twenty-four hours, but afterwards it ſcarce advanced

a communication is wanting, or not ſufficiently large, it heaves and ſhakes the earth till it has made its way to the mouth of the volcano. He farther obſerves, there is ſcarce any country much annoyed with earthquakes, that has not one of theſe fiery vents; which when an earthquake happens is conſtantly in flames, diſgorging that fire, which, whilſt underneath, was the cauſe of the diſaſter. So that the countries that have theſe volcanos, though they are troubled with earthquakes, would ſuffer much more from them if ſuch ſpiracles were wanting, and the fire ſhould continue impriſoned in the bowels of the earth.

To illuſtrate the proceſs of nature in the production of earthquakes, it may not be amiſs to take notice, that artificial ones may be made by mixing twenty pounds of iron filings with an equal quantity of ſulphur, and tempering the whole together with a little water, ſo as to form a maſs half dry, half moiſt. This being buried three or four feet in the ground will produce ſurprizing effects, in ſix or ſeven hours time; for the earth will begin to tremble, crack, and ſmoke, and at laſt ſend forth fire and flame, ſo as to reſemble, if the quantity of matter were ſufficient, a natural volcano.

vanced a furlong in a day; and thus it continued for fifteen or twenty days together, running into the ſea cloſe by the walls of Catania. At length it made its way over the walls into the city, where however it did no conſiderable damage, except to a convent of Benedictines. In its courſe it overwhelmed fourteen towns and villages, containing three or four thouſand inhabitants; and it is remarkable, that during the whole time of this eruption, which was fifty-four days, neither ſun nor ſtars appeared.

But though Catania had this time the good fortune to eſcape the threatened deſtruction, it was almoſt totally ruined in 1692-3 by an earthquake, one of the moſt terrible in all hiſtory. It was not only felt all over Sicily, but likewiſe in Naples and Malta; and the ſhock was ſo violent that people could not ſtand upon their legs, and thoſe who lay upon the ground were toſſed from ſide to ſide, as if upon a rolling billow. The earth opened in ſeveral places, throwing up large quantities of water; and great numbers periſhed in their houſes by the fall of rocks that were looſened and rent from the mountains. The ſea was violently agitated, and roared dreadfully, mount Ætna threw up vaſt ſpires of flame, and the ſhock was attended with a noiſe exceeding the loudeſt claps of thunder. Fifty-four cities and towns, with an incredible number of villages, were either deſtroyed or greatly damaged; and it was computed that near ſixty thouſand people periſhed in different parts of the iſland, of whom

eighteen thouſand were inhabitants of Catania, very few eſcaping the general and ſudden deſtruction of that city.*

We are informed by Dr. St. Clair, in the Philoſophical Tranſactions, that on the ſide of one of the Appenines, between Florence and Bologna, there is a ſpot of ground three or

* That theſe volcanoes were all kindled of themſelves, at or near the time of the creation, Dr. Liſter thinks probable; becauſe there is at preſent but a certain number of them known; and theſe have all continued burning at all times from the earlieſt hiſtory: and none of them have ever been extinguiſhed wholly, or probably ever can be, any other way than by the ſubverſion of the whole into the ſea. That they originally kindled of themſelves, by means of the Pyrites they contain, he thinks very probable; becauſe we find that the Pyrites will kindle of itſelf; and there is no other apparent cauſe for their kindling: for if we ſuppoſe the ſun to have done it, the mountain Hecla in Iceland, ſhould have been excuſed, as ſtanding in a northerly and colder climate; and if we attribute the kindling of them to lightnings or earthquakes, we favour the Doctor's ſyſtem, in regard that he deduces theſe from the breath or exhalations of the ſame mineral. It is alſo obſerved, that no ſubject in the whole mineral kingdom is ſo proper for the keeping up a fire for the many ages theſe mountains have been burning, as the Pyrites. Nothing is ſo laſting a fuel; and in general, other fuels become more or leſs laſting, as they partake more or leſs of its nature.

four

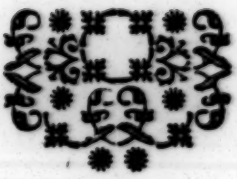
four miles in diameter, from whence iſſues a conſtant flame, which riſes very high and gives a great heat, but without noiſe, ſmoke, or ſmell. In laſting and heavy rains it ſometimes intermits, but rekindles with greater heat and vigour. The Doctor adds, that corn grows within a few yards of it; and he conjectures the flame ariſes from a vein of bitumen or naphtha. There are other fires of this kind upon the ſame mountains.

The Solfatara, near Puzzuoli in the kingdom of Naples, is a remarkable hill, on which there is a cavity of an oval form, from ſeveral parts whereof iſſues a thick ſmoke, or ſteam, and ſometimes flame. The ſurface of the ground is always very warm, and in ſummer-time is covered with a ſaltiſh flour or duſt, which they ſweep together, and put into coppers filled with water, and placed over certain ſubterraneous ſpiracles, the heat whereof, without any other fire, evaporates the water, and leaves an alum behind.

In 1538, during the time of an eruption of mount Veſuvius, a ſmall mountain, about a hundred fathoms high, called *Montenuovo*, or the new mountain, ſtarted up in one night, near Puzzuoli. M. de la Condamine is of opinion that ſome curious reſearches might be made in the bowels of this mountain.

Pliny relates, *Lib.* II. *Cap.* 83. that, in the reign of the Emperor Nero, the following ſurpriſing

priſing event happened in the neighbourhood of Chieti, which no doubt was occaſioned by an earthquake, viz. that a whole garden of olive trees roſe up, and tranſported itſelf on the other ſide of the highway, while a field on that ſide was removed where the garden had been.



CAVERNS.

ITALY abounds with ſeveral curious caverns, or grottos, the moſt remarkable of which is a cavern about two miles from Naples, called *Grotto del Cani*, the *Grotto of the Dogs*, from the frequent experiments made upon dogs in it. Here is a thick ſuffocating vapour which riſes from ſix to ſeven inches above the ſurface of the ground; the ſides of the grotto, as far as the vapour reaches, are of a greeniſh colour, and above this mark, the air is not in the leaſt offenſive, or injurious. A dog, thrown into the grotto, becomes immediately convulſed, and in leſs than a minute loſes all ſigns of life: but on his being carried into the open air, or thrown into a neighbouring lake, if he is not quite dead, ſoon recovers. A burning torch dipped into the vapour goes out in a moment, ſnuff and all; and a piſtol will not fire in it. The Abbe Nollet made ſeveral experiments upon the vapour of this grotto lately, as did alſo M. de la Condamine, who laid his face cloſe to the earth, and drew in the vapour ſeveral times, the effect of which was only a little ſmarting over the eyes, with ſomething ſtrong in the throat, which, though it cannot be called acrid, produced nearly the ſame ſenſation as when a weak volatile ſalt is ſnuffed up, but without any ſmell; that is, there was nothing very diſtinct as to the odour or taſte, but

but ſomething very penetrating and ſuffocating.

Dr. Mead is of opinion, that the fumes of the Grotto del Cani are no real poiſon, but act chiefly by their gravity; Dr. Connor attributes the death of animals and the extinction of lights to the great rarefaction of the air, cauſed by the heat and eruption of the ſteams; and Mr. Addiſon accounts for theſe phænomena, by ſuppoſing the vapour to have a glutinous or viſcuous quality.

Near the village of Saſſa, about eight miles from Bracciano, in the Patrimony of St. Peter, is another little cavern, called *Grotto del Serpi*, or the *Grotto of Serpents*, which is only big enough to hold two perſons, and is perforated with a great many fiſtular apertures, almoſt like a ſieve, out of which, at the beginning of the ſpring, iſſues a vaſt number of young ſnakes, of different colours, but not endowed with any particular poiſonous quality. In this cavern, perſons afflicted with a leproſy, elephantiaſis, palſy, or gout, are ſaid to be expoſed naked, when a ſweat will be raiſed by the warmth of a ſubterranean ſteam which iſſues out through theſe apertures, and the ſerpents will cling round the patients, licking and ſucking the parts affected; and by repeating this practice for ſome time, the diſtemper, it is ſaid, will be entirely removed. Kircher, who viſited this grotto, affirms, that he found it warm, and heard a hiſſing noiſe in the holes;

holes; and though he did not ſee the ſerpents, not having been there at the ſeaſon of their creeping out, yet he ſaw ſeveral of their exuviæ, or ſloughs, in the grotto, and ſaw moreover ſeveral of them hanging upon an elm-tree, near the mouth of the cavern.

It is ſaid, that the extraordinary qualities of this cave were diſcovered by a leper, who was upon his journey to ſome baths near Rome, to receive the benefit of the waters: but, loſing his way, and being benighted, he happened to creep into the cavern to lodge there. Finding it warm, he pulled off his cloaths, and being weary and ſleepy, had the good fortune not to perceive the ſerpents about him, till they had wrought his cure.

The grotto of Pauſilypo is a ſubterraneous paſſage, cut through a hill of the ſame name, between Puzzuoli and Naples. It is four hundred and forty paces long, twenty feet broad, and forty feet high, at each entrance: but it grows lower by degrees, for the better admiſſion of the light. This road was antiently very dark and duſty, which inconveniencies have been, in ſome meaſure, remedied, by making openings at the top, and paving the bottom of it; but it is ſtill a troubleſome and tedious paſſage. The ſtone dug out of this hill is good for building; whence it is conjectured, that this cave was not originally cut for a road, but was a quarry of ſtone.

Near

Near the city of Vicenza, in the territory of Vicentino, is a grotto, called Il Cubalo, cut into the ſolid rock, and computed to be an hundred paces in length; but withal ſo intricate, that if any perſon ventures into it without lights, he is ſure to be loſt in it: the place is ſo exceſſive cold, that it is intollerable even in the warmeſt day in ſummer: here are ſome ſprings and currents, which petrify every thing that is thrown into them, and yet abound with ſome ſort of fiſh.

Near the city of Enna, in the territory of Val di Noto, in Sicily, is a cavern, which is ſuppoſed to be bottomleſs, and which the antients imagined reached down to hell; whence they fancied that, through this cavern, Pluto came out in his car, and carried off Proſerpine, from the neighbouring fields, which they add were afterwards turned into a lake, now called Pergus.

In the iſle of Iſchia, near Sardinia, are ſeveral caverns, called Cremate, out of which there were ſuch eruptions of fire, and ſuch torrents of ſulphur were vomited up, in the year 1301, as ruined the whole country, for three miles round. This iſland has been always ſubject to dreadful earthquakes, inſomuch that the poets feigned it to be the place where Jupiter overwhelmed the Titan Typhon, with his thunder-bolts.

MEDICINAL SPRINGS, *and other* SINGULAR SPRINGS, LAKES, *and* CATARACTS.

THE medicinal ſprings of Italy and the neighbouring iſlands, are too numerous to be taken notice of in a *Compendium* of this kind. The kingdom of Naples, in particular, abounds with hot baths, impregnated with ſulphur and other minerals, which are frequented for many diſtempers, eſpecially arthritic, rheumatic and venereal caſes.

On the ſide of a hill, about a mile from Viterbo, there are ſeveral hot ſprings, the water of which have a ſulphureous and brackiſh taſte. Theſe ſprings are ſurrounded with a low wall, and ſend out four ſtreams, or rivulets, into proper baths or receptacles, where the heat of the water is much abated. Theſe waters are chiefly uſed for bathing; the internal uſe of them not being thought very ſafe, on account of the vaſt quantity of calcarious matter contained in them.

Aix, in the duchy of Savoy, is celebrated for its hot medicinal ſprings; and near the city of Volterra, in the territory of Piſano, are ſome remarkable hot ſprings, from which iſſue ſuch ſtrong ſulphureous fumes, that the birds, in their flight over them, are ſuffocated, and drop down dead: the ebullition in theſe

ſprings is ſo great, that the water bubbles up eight or nine feet, with a conſiderable noiſe.

The waters of Cumæ, in the kingdom of Naples, were much commended by the ancients for their ſalutary virtues; and near Tiano, in Terra di Lavoro, in the ſame kingdom, are ſome medicinal waters greatly eſteemed as an efficacious remedy againſt the ſtone.

M. de la Condamine aſſures us, that, in the gulph of Specia, he ſaw a ſpring of freſh water in the middle of the ſea; and in the iſland of Zant, belonging to the Venetians, there is a ſpring of freſh and clear water, which throws up pieces of pitch, ſeveral of them as big as a man's thumb, and ſome much larger; and when the water of this ſpring has ſtood to be thoroughly ſettled, a conſiderable quantity of pitch, in proportion to the quantity of water, is found at the bottom. It is ſaid, that the people in the neighbourhood of this ſpring, procure annually, upwards of an hundred barrels of pitch from it, with which they pitch their ſhips and other veſſels.

In the Dutchy of Modena, there are ſeveral ſprings or wells, from the ſurface of which is gathered a ſubtle, inflammable, mineral oil, of a fragrant bituminous ſmell, and of different colours, called Petroleum, oil of Petre, or rock-oil, becauſe it frequently iſſues from the clefts of rocks; and the ſprings on which

it floats are generally found on craggy mountains. Near a place in this dutchy called Frumetto, the inhabitants dig wells to come at theſe oily ſprings, and find in thoſe at the bottom of a hill a large quantity of red oil, but thoſe near the top yield a white oil as clear as water. There is another hill near the Appenines in the ſame country, from whence riſes a perpetual ſpring of water, on which this oil ſwims, and in ſuch quantities, that twice a week they gather ſix pounds at a time.

Petroleum is an extremely ſubtle and penetrating fluid, and is by much the thinneſt of all the native bitumens. It is very light and very pellucid; but though equally bright and clear under all circumſtances, it is liable to a very great variety in its colour. It is naturally almoſt colourleſs, and in its appearance greatly reſembles the moſt pure oil of turpentine: this is called white petroleum, though it has no more colour than water; it is ſometimes tinged of a browniſh, reddiſh, yelloviſh, or faint-greeniſh colour; but its moſt frequent colour is a mixture of the reddiſh and blackiſh, in ſuch a degree, that it looks black when viewed behind the light, but purple when placed between the eye and a candle or window. It is of a pungent and acrid taſte, and of a very ſtrong and penetrating ſmell, which very much approaches to that of the diſtilled oil of amber. The white is moſt eſteemed. It is ſo very inflammable, that while it floats on

the ſurface of the water, as it does in many parts of Italy, it takes fire at the approach of a candle. Petroleum is found in rivers, in wells, and trickling down the ſides of hills, along with little ſtreams of water. In ſhort, it is the moſt frequent of all the liquid bitumens, and is perhaps the moſt valuable of them all in medicine. It is to be choſen the pureſt, lighteſt, and moſt pellucid that can be had, ſuch as is of the moſt penetrating ſmell, and is moſt inflammable. It is principally uſed externally in paralytic caſes, and in pains of the limbs. The French give it internally in hyſteric complaints, and to their children againſt worms; ſome alſo give it from ten to fifteen drops in wine, for ſuppreſſion of the menſes. Theſe, however, are rather the practices of the common people than of the faculty.

The little lake near Tivoli, and the rivulet called Salforata, that iſſues from it, are remarkable for their offenſive ſulphureous ſtench, which infects the air to a conſiderable diſtance. In the lake are ſeveral floating iſlands, fifteen or twenty yards long, ſuppoſed to be formed originally of ſulphureous earth riſing from the bottom; and the banks ſeem to have encroached upon the lake by an incruſtation of the ſame matter, which in time may probably cover its whole ſurface.

About three miles from Terni, in the dutchy of Spoleto, is a famous cataract, called the Cataract

Cataract of Terni, formed by the fall of the river Velino, mentioned by Virgil. The channel of the river lies very high, and is on all ſides ſhaded by a green foreſt, conſiſting of ſeveral kinds of trees, that preſerve their verdure all the year, and with theſe the neighbouring mountains are covered. The river runs extremely rapid before it falls, and then ruſhes down a precipice three hundred feet high, throwing itſelf into the hollow rock, which has been probably worn with ſuch a conſtant fall of water. It is impoſſible to ſee the bottom, on which it breaks, on account of the thickneſs of the miſt that riſes from it, which, at a diſtance, looks like clouds of ſmoke, aſcending from a vaſt furnace, and diſtils in perpetual rains upon all the places that lie near it.

The river Teverone, near Tivoli, in the Pope's territories, runs down a precipice upwards of a hundred feet high; and near the town of Sora, in the territory of di Lavoro, in the kingdom of Naples, the river Garigliano precipitates itſelf by two caſcades, the one perpendicular, about ſixty feet high, and forty broad, the other much leſs rapid, but the ſight of which is not leſs ſingular, nor leſs agreeable to the eye.

SECT. III.

An Hiſtorical Account of the moſt remarkable Earthquakes, Fires, and other public Calamities, which, at different times, have viſited the Inhabitants of Italy, *and the* Italian *iſlands.*

ITALY has ſuffered more by earthquakes, than by any other general calamity: and indeed there are few countries in which greater and more frequent devaſtations have been made by thoſe moſt formidable and aſtoniſhing concuſſions; particularly the Two Sicilies, where whole cities have often been overwhelmed, and buried by the eruptions of the two volcanos of Ætna and Veſuvius, and others totally overturned, or otherwiſe deſtroyed, by earthquakes, which have accompanied ſuch eruptions; but ſome accounts of the effects of the moſt memorable of thoſe eruptions upon record, and the earthquakes that attended them, have been given already in the natural hiſtory of the volcanos.

But different parts of Italy have frequently ſuffered by earthquakes, which do not appear to have been the attendants of the eruptions of Ætna or Veſuvius, particularly the city of Budoa, in Dalmatia, and ſeveral places in the neigh-

neighbourhood, were greatly damaged by an earthquake, which happened in 1667.

The city of Ferrara, in the dutchy of the ſame name, about the beginning of the laſt century, was almoſt reduced to a heap of rubbiſh, by a violent earthquake, which laſted forty hours, in which time this city received one hundred and ſixty ſhocks.

Upon the 2d of February, 1703, the city of Aquila, in the kingdom of Naples, was almoſt totally deſtroyed by an earthquake, and near four thouſand of the inhabitants periſhed by it. The greateſt part of the city of Benevento, in the farther Principat, was deſtroyed by the ſame earthquake; and this city has ſuffered ſo much by earthquakes, that ſcarce any thing but ruins are to be ſeen in it.

In ſhort, many are the earthquakes which have, at various times, overturned ſeveral of the cities of Italy and Sicily: the city of St. Euphemia was ſwallowed up by an earthquake in 1638; the gulphs of Palermo were opened by an earthquake in 1718, and the city of Syracuſe was overturned by one, within theſe very few years.

No place in Italy appears to have ſuffered more from fire than the city of Annecy, in Savoy, which was formerly large, populous and

and opulent, but in 1448, was almoſt burnt down to the ground. But enough of ſuch lamentable ſubjects.

Swellings of the throat have been always ſo common to the inhabitants of the mountainous parts of Italy, that the old Roman authors ſay, "Who wonders at a ſwelled throat "in the Alps?" And it is obſerved of the mountaineers of Savoy, that they are ſubject to a ſort of wens or excreſcences of fleſh, which grow about their throats, and are ſuppoſed to be induced by the uſe of ſnow water. Some of theſe excreſcences are of a large and enormous ſize, and very much diſfigure ſuch as have them, particularly the women, and yet there appears to be no other inconvenience attending them, as they are neither painful or dangerous.

SECT.

SECT. IV.

An Account of the moſt celebrated Inventions, Diſcoveries, &c. of the Inhabitants of Italy *and the* Italian *iſlands.*

IF the military art has been leſs cultivated by the modern Italians, than it was by the ancient inhabitants of theſe countries, it may be affirmed, that they have made greater improvements in the more ſoft and gentle arts, ſuch as architecture, painting, muſic, and ſome others, than perhaps any modern nation in Europe; nor have they neglected the more noble ſciences, but made very conſiderable improvements and diſcoveries in mathematical and philoſophical knowledge; as well as in ſeveral of the liberal arts.

But arms, or the art of war, were not the only one improved by the ancient inhabitants of Italy, and the Italian iſlands. The illuſtrious Archimedes, who was a native of Syracuſe, in Sicily, ſtands foremoſt among all the geometricians of antiquity, for the improvement of mechanics, in which he had ſuch a ſurpriſing invention, that he declared to Hiero, King of Syracuſe, whoſe relation he was, that if he had another earth whereon to plant his machines, he could move this which

we inhabit: he is ſaid to have formed a glaſs ſphere, of a moſt ſurpriſing workmanſhip, wherein the motions of the heavenly bodies were repreſented. Claudius has an epigram upon this invention. He diſcovered the method of finding the various comparative, or ſpecific gravities of fluid and ſolid bodies: but he became moſt famous for his curious contrivances, by which the city of Syracuſe was ſo long defended, when beſieged by Marcellus. Plutarch tells us, that he diſcharged on the Roman fleet, from one of his engines, ſtones which weighed twelve hundred and fifty pounds each. At the ſame time, ſeveral other machines, which were not viſible without the walls, played inceſſantly on the Roman ſhips; and overwhelmed them with ſhowers of ſtones, rafters, and beams, pointed with iron; ſo that the Roman Conſul, being at a loſs what to do, retired, with all poſſible haſte, and ſent orders for his land-forces to do the ſame: for the attack on the land-ſide was attended with no better ſucceſs; the ranks being broken, and thrown into the utmoſt confuſion, by the ſtones and darts which flew from the machines, with ſuch noiſe, force, and rapidity, that they ſtruck the Romans with terror, and daſhed all to pieces before them; and the Roman ſoldiers were ſo terrified, that if they ſaw upon the walls only a ſmall cord, or the leaſt piece of wood, they turned their backs and fled, crying, that Archimedes was going to diſcharge ſome dreadful machine upon them. From hence, and a great many other circum-

circumſtances, mentioned by hiſtorians, relating to thoſe machines, it muſt be allowed that they excelled every thing invented by the moderns, notwithſtanding the progreſs the mechanic arts have lately made in Europe; and it is to be lamented, that none of the antient hiſtorians have given us deſcriptions of thoſe machines, and the manner in which their operations were performed; as doubtleſs a knowledge of their conſtruction would have been of infinite ſervice to the moderns, and enabled them to have carried this art to a much greater degree of perfection. Archimedes is ſaid to have been killed in the 143d Olympiad, and 546th year of Rome, about two hundred and eight years before the birth of Chriſt. We have ſeveral of his works ſtill extant, but the greateſt part of them are loſt.

Among the antient Romans, Virgil, Horace, Juvenal, Lucretius, Ovid and others, carried poetry to a great degree of perfection, and equalled the Greeks. Cicero brought oratory to the greateſt height at Rome, and equalled if not excelled Demoſthenes himſelf. Vitruvius imitated the Greek architects, and introduced among the Romans a true taſte in building. Celſus, who flouriſhed in the reign of Auguſtus and Tiberius, was greatly eſteemed as a phyſician, and natural hiſtorian; and Pliny enriched the world with a body of natural hiſtory, and the only one which the antients have left us. It muſt be owned, that Pliny received too eaſily the informations of others, and

and that his works would have been of infinitely more ſervice to the public, had he made criticiſm and experiments keep pace with his reſearches. His works are however, with all their faults, of the greateſt uſe, and, were his miſtakes properly pointed out, might be uſed with the greateſt advantage to convey into the minds of youth the richeſt ſtock of all the terms of the Latin tongue, together with ſuch branches of learning as are moſt proper to adorn their minds, and afford them employment for the remainder of their lives.

Among the modern Italians was the great Columbus, who diſcovered America. He was a native of Genoa, and was born in 1442. This moſt celebrated adventurer, having applied himſelf to the ſtudy of geometry, aſtronomy and coſmography, went to ſea; and having gained much experience from long voyages into different parts of the world, was perſuaded that there muſt be large and habitable countries in the weſtern ocean. He therefore laid a plan for the diſcovery of this ſuppoſed new world before the King of Portugal; but the King giving him no great encouragement, he made application to ſome other European princes and ſtates, particularly to King Henry the Seventh of England, to furniſh him ſome ſhips and money to proceed on his intended voyage. After many ſolicitations, he at length obtained the neceſſary aſſiſtance from Ferdinand and Iſabella, King and Queen of Spain, who provided him with money,

money, to fit out three ſmall ſhips for the expedition. This little ſquadron, manned only with ninety men, ſet ſail from Palos in Andaluſia, on the third of Auguſt 1492, arrived at the Canaries on the twelfth of the ſame month, and left thoſe iſlands the firſt of September, directing their courſe to the weſtward. But they had not ſailed above a fortnight in this wide ocean before the men began to murmur; for obſerving the wind to ſet conſtantly from eaſt to weſt, they apprehended there would be no poſſibility of returning, and therefore concluded they muſt inevitably periſh, if they miſſed the land they were made to expect. Their fears however were in ſome meaſure diſſipated on the nineteenth, when they obſerved ſome birds flying over their ſhips, and ſaw abundance of weeds driving by them on the twenty-ſecond. Having continued their courſe weſtward for ſome time longer, and meeting with no land, the ſeamen began again to mutiny, and were near upon reſolving to throw their admiral over-board, and endeavour to return to Europe; but happily for Columbus, they were once more pacified by ſeeing birds, weeds, and even a ſhrub with berries upon it ſwim by them, which gave them freſh hopes the land was at no great diſtance. Accordingly, on the eleventh of October, about ten at night, the admiral firſt diſcovered a light upon the iſland of Guanahani, or St. Salvador, which laſt name he gave it in conſideration that the ſight of it delivered him and his men from their fears of periſhing. In the morning the

ſhips anchored near the iſland, which the natives beheld with the greateſt aſtoniſhment, whilſt the admiral went aſhore in his boat, and took poſſeſſion of the country in the name of their Catholic Majeſties. The poor people were extremely pleaſed with the beads and other toys the Spaniards diſtributed amongſt them, and followed Columbus and his people wherever they went, ſeeming to adore them as if they were come from heaven. From this iſland they ſailed to Cuba and Hiſpaniola, whence they departed for Europe, and arrived at Palos on the thirteenth of March 1492-3, where a ſolemn proceſſion and thankſgiving were made for their return, and the admiral was received by their Catholic Majeſties with the greateſt honours.

Columbus afterwards made two voyages to this New World, which yet has not taken its name from him, as might be naturally expected it would have done, but from Americ Veſpuſio, a Florentine by birth, who was ſent in 1497 by Emanuel King of Portugal, to continue the diſcoveries begun by Columbus *.

Galileo,

* Though the honour of the firſt diſcovery of America ought undoubtedly to be given to Columbus, we muſt allow a proper ſhare to the ſeveral ſucceeding adventurers, and amongſt the reſt to John Cabot, who was employed by Henry the Seventh of England, and in the year 1497 diſcovered Newfoundland, and ſailed along the coaſt of

Galileo, or Galilei, the ſon of Vinzenzo Galileo, a nobleman of Florence, was born the 19th of February 1564. In 1592, he was appointed profeſſor of mathematics in the univerſity of Padua; ſoon after which, he wrote a treatiſe of mechanics, and ſhewed, after the problem of Archimedes, the manner of finding the alloy or mixt metals by means of the hydroſtatical ballance. While he was profeſſor at Padua, he invented the teleſcope, confirmed the ſyſtem of Copernicus, and diſcovered wonders in the ſtarry regions, till then hid from the ſight of mortals. One of the firſt of his diſcoveries was that of four of Jupiter's ſatellites, which he called the Medicean ſtars, or planets, in honour of Coſmo the Second, Grand Duke of Tuſcany, who was of that noble family; and ſent for Galileo from Padua, and made him profeſſor of mathematics at Piſa, in 1611; and ſoon after inviting him to Florence, gave him the poſt and title of General Philoſopher and Mathematician to his Highneſs. In 1612, having obſerved ſome ſolar

of America, as far as the Cape of Florida. And hence it appears, that whatever right the Spaniards have pretended to that part of the New World, the Engliſh had a right equal if not ſuperior to theirs; even ſetting aſide their claim to a diſcovery much earlier than that of Columbus himſelf, by a Welſh prince named Madoc, whoſe ſhip was accidentally caſt upon the American coaſt in the twelfth century; which ſtory, though treated by many as fabulous, ſeems not to be without foundation.

ſpots, he printed that diſcovery the year following at Rome, in which and in ſome other pieces, he ventured to aſſert the truth of the Copernican ſyſtem, and brought ſeveral new arguments to confirm it. This ſtartled the jealous eyes of the Jeſuits, who thereupon procured a citation for him to appear before the holy office at Rome, in 1615, where he was charged with hereſy, for maintaining that the ſun was in the center of the world, and immoveable by local motion, and that the earth is not the center of the world, nor immoveable, but actually moves by a diurnal motion; both which propoſitions were declared contrary to the word of God. He was detained by the inquiſition at Rome, for upwards of a year, when ſentence was paſſed againſt him, by which he was enjoined to renounce his heretical opinions, and not to defend them either by word or writing; nor even to inſinuate them into the mind of any perſon whatſoever; and he obtained his diſcharge, only by a promiſe to conform himſelf to this order. He however went on making new diſcoveries in the planetary ſyſtem, and occaſionally publiſhing them; upon which he was again cited before the inquiſition in 1632, obliged to abjure his doctrines in the moſt ſolemn manner, and committed priſoner till the year 1634, when his books were burnt at Rome.

He was author of ſeveral noble and uſeful inventions and diſcoveries, beſides thoſe already

ready mentioned. In aſtronomy, he diſcovered the trepidation or vibration of the moon; as alſo the inequalities, or mountains, on its ſurface. By the frequent eclipſes of the Mediccan ſtars, he had thoughts alſo of finding out the longitude, much better than by the lunar eclipſes; upon which he compoſed his tables of their motions. In geometry, he invented the cycloid or trochoid; and in mechanics he firſt found the exact degree of celerity in the deſcent of bodies, by the force of gravity.

END OF VOL. VI.